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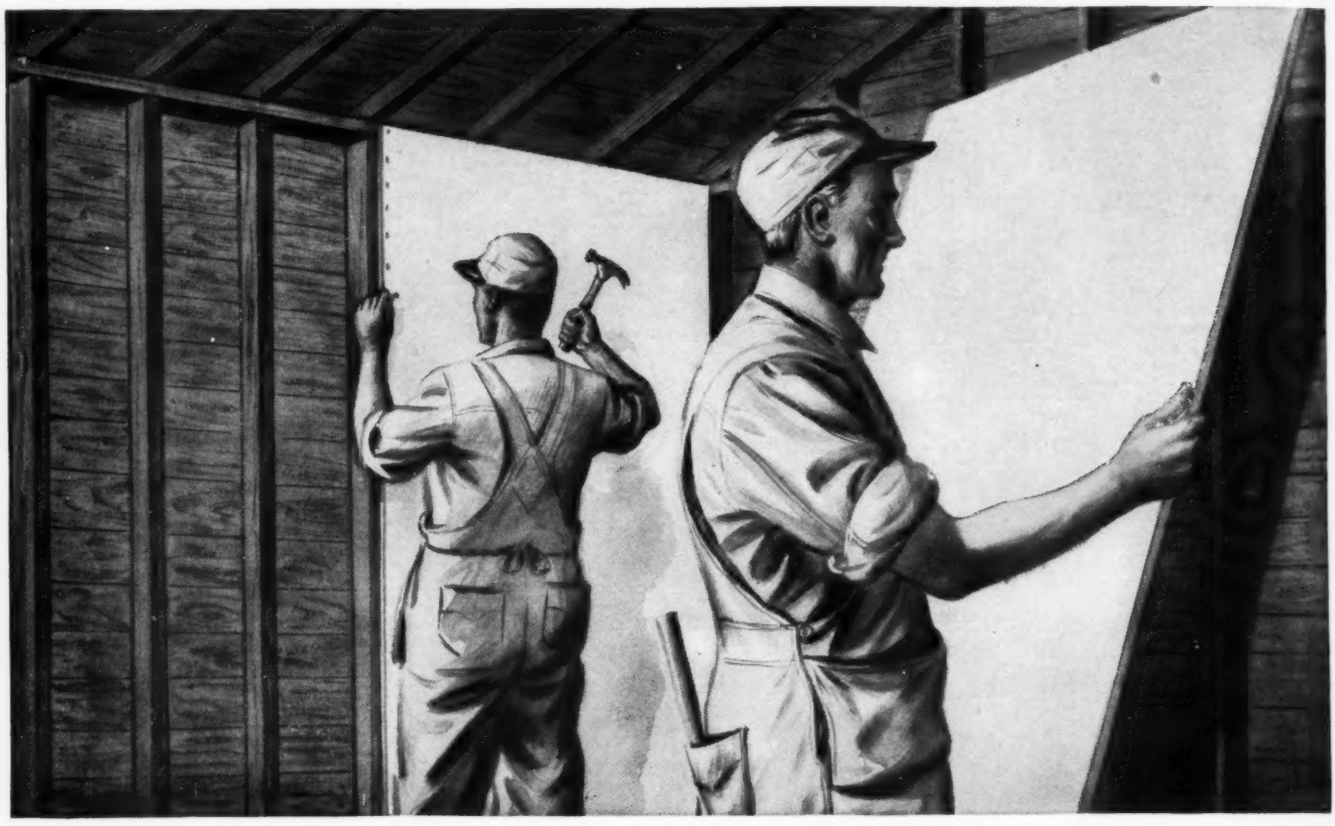
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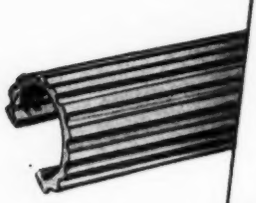
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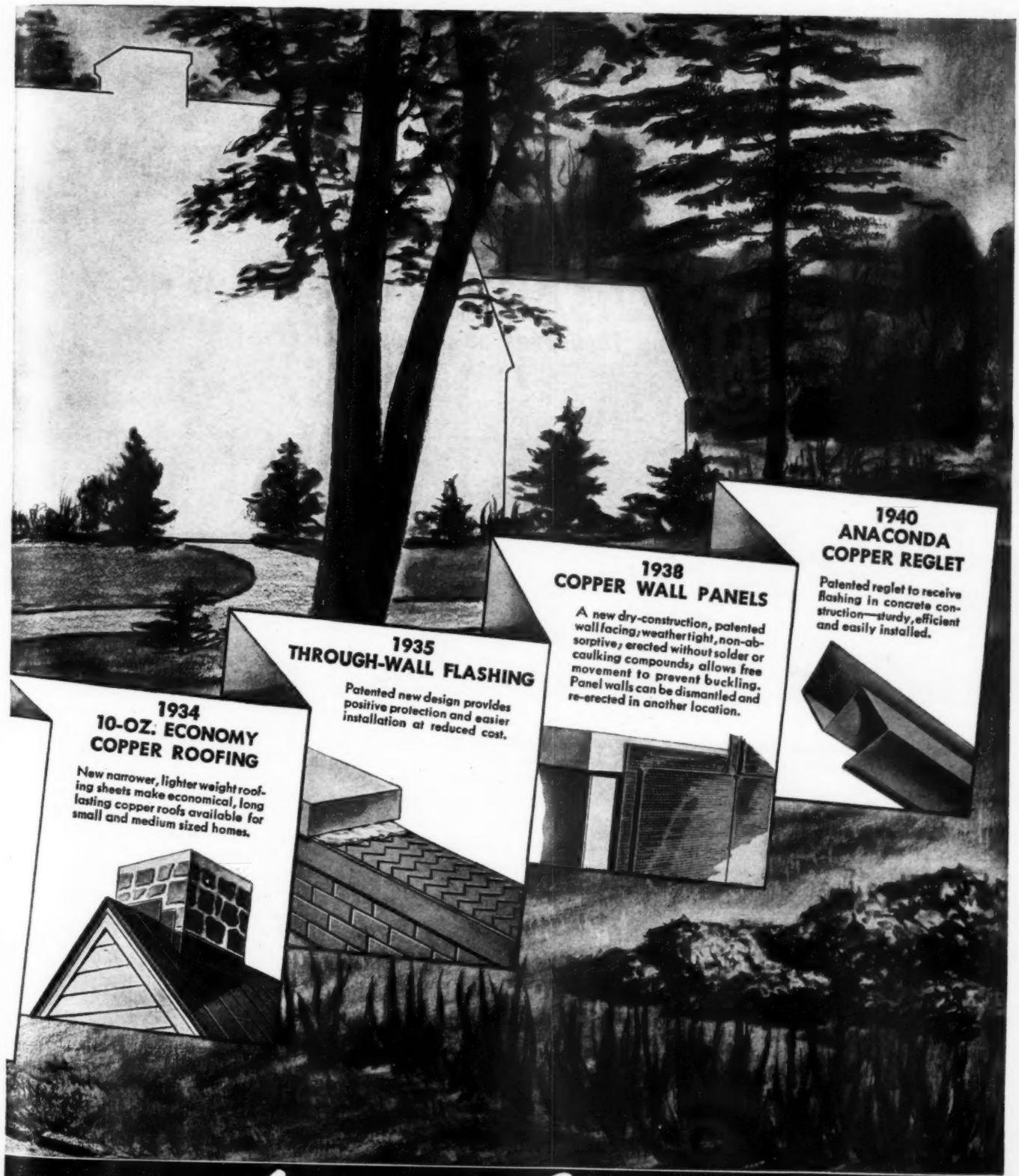


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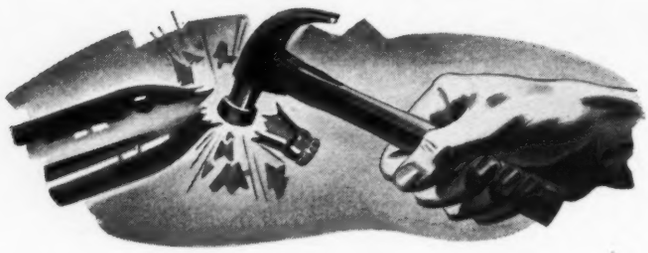
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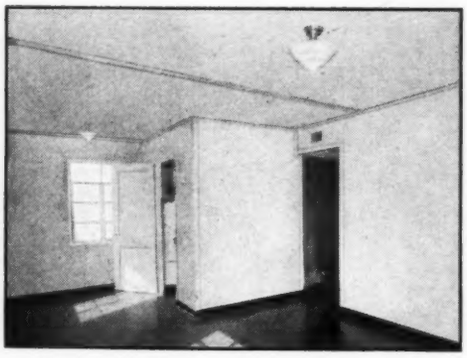
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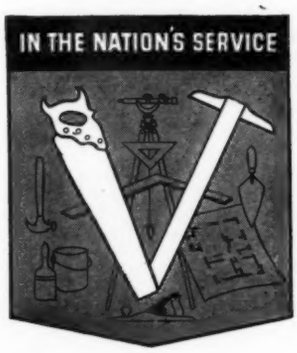
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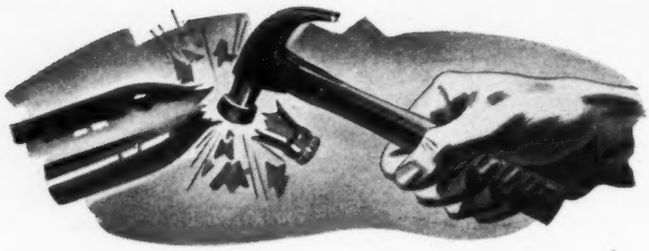
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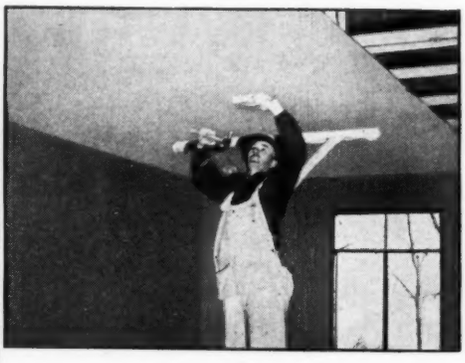
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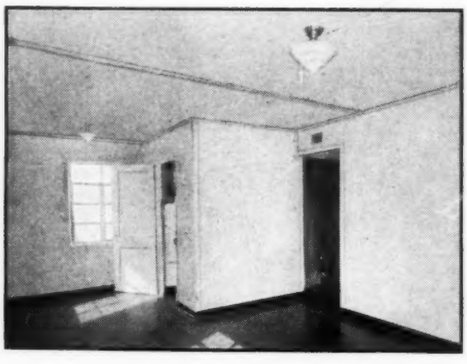
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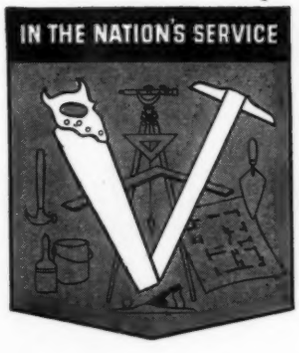
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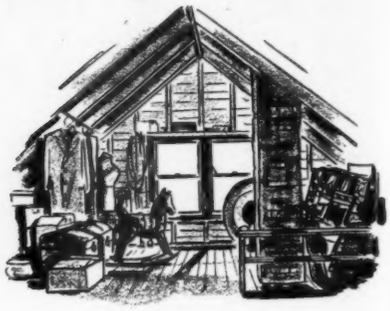
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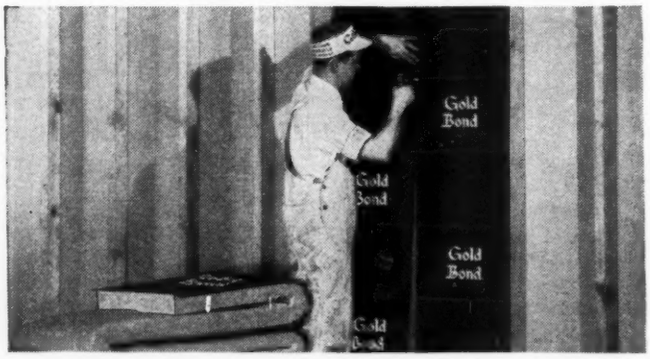
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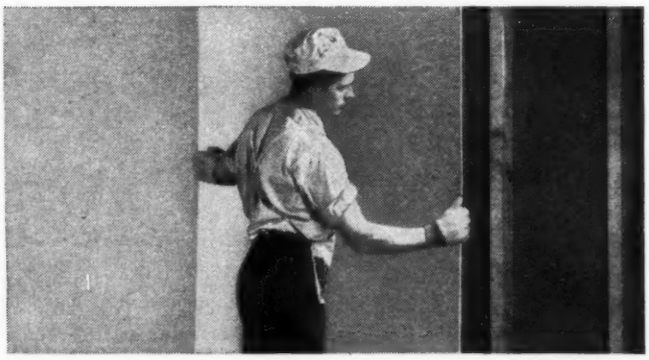


You can turn the unused attics of your community into urgently needed homes for war workers. Here's how!

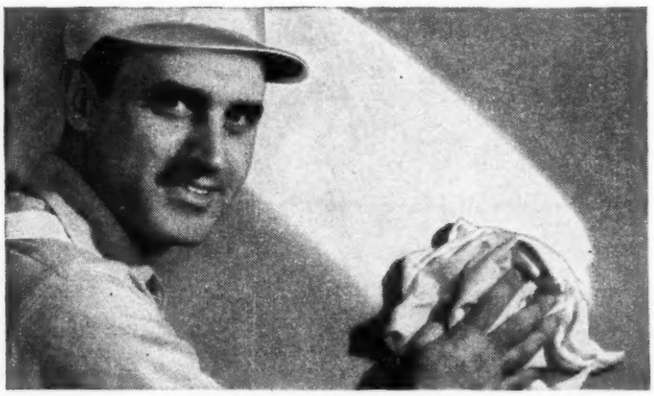
THE shortage of living quarters for war workers is acute. But there's one possible quick solution—a solution to which you hold the key. Most houses have unused space on the third floor, in the attic or basement which could quickly and easily be remodeled into a rentable room. Materials for remodeling are available. The added rooms would help meet the housing shortage. They would provide the owners with an additional source of income. And there's a real profit in it for you. Why not start a drive in your community now? It's easy as 1-2-3! Just read the plan outlined below and see!



1. SUGGEST ROCK WOOL INSULATION! Attic rooms should be insulated for comfort. You can get all the Gold Bond Rock Wool you need in a hurry—in batt, blanket and loose form. It can be applied to walls and ceilings in a jiffy, and without specially-trained workmen. It is fireproof, vermin-proof, permanent in efficiency. Cuts heating fuel consumption as much as 33⅓%!



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3. FINISH WITH WASHABLE PAINT! There's no shortage of new Gold Bond resin-emulsion Sunflex Deluxe Paint! It uses no critical war materials, yet painters who have tested it say it has the easiest let-down, the smoothest brushing and best coverage qualities of any washable wall paint made! That means faster painting and lower costs. One coat covers practically any surface—even brick and wallpaper and it dries in *one-hour* without any painty smell. Rooms can actually be occupied the same day they are painted!



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Publisher's Page

Private Versus Government Housing

PROBABLY 90 per cent of current building in this country is being done with government money by large and small private contractors the usual business of whom is to build for private companies and individuals. Even a large part of residential construction is now being done with government money to provide war housing in defense areas.

There can be no reasonable question that immediately following the war there will be, not only a great decline of building for *war* purposes, but need of a great increase of building for *civilian* purposes. Relatively the greatest part of this need will be for residential construction. There was developing a shortage of satisfactory housing before the war; and it will be more acute in most communities after the war.

Will virtually all of this post-war building be done by private enterprise —that is, by *private* contractors employed by *private* capital—or will a large part be done with government money? The advocates of government housing construction to clean up slum areas, and to provide low rentals in such areas and elsewhere for the so-called "underprivileged," are too numerous and influential to be ignored. But to let them have their way would be the surest means of *preventing* enough *total* post-war building from being done.

A very important question involved is that of taxation. When government within recent years has erected housing in various places it has sought much lower taxation of housing owned by it than that levied by state and local authorities on privately-owned property. The purposes have been to enable the government (1) to show lower costs, and (2) to charge lower rentals (without showing losses) than would otherwise be possible.

The taxes thus *saved* on *government*-owned property are *added* to those levied on surrounding *privately*-owned property. When government housing competes, at rentals made artificially low by taxation and other policies, with private housing that must charge rentals based on *real total* costs of ownership, many people naturally prefer government housing. There is thus created a demand for more government housing.

It is not in accordance with the American way for private enterprise to be subjected to government competition at all. It is doubly unfair and economically unsound for private property to be subjected to the competition of government property that is *subsidized* by abnormally low taxation at the cost of abnormally high taxation of competing private property. The more of such government competition there is, or that is even threatened, the less building by private enterprise there will be. But experience throughout the world has demonstrated that in time of peace only private enterprise can be relied on to provide enough good housing.

Private enterprise should be alert to resist every effort to increase permanent government construction and ownership of housing *subsidized* with taxes levied on private property. The mere demand for subsidies is an admission that government cannot compete on *equal terms* with private enterprise; the more subsidies demanded, the more conclusive is the argument for leaving the field to private enterprise.

Samuel O. Dunn,

THE NEW PENCIL POINTS — KAWNEER ARCHITECTURAL

COMPETITION

"THE STORE FRONT OF TOMORROW"

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5 HONORABLE MENTIONS, $100.00	500.00
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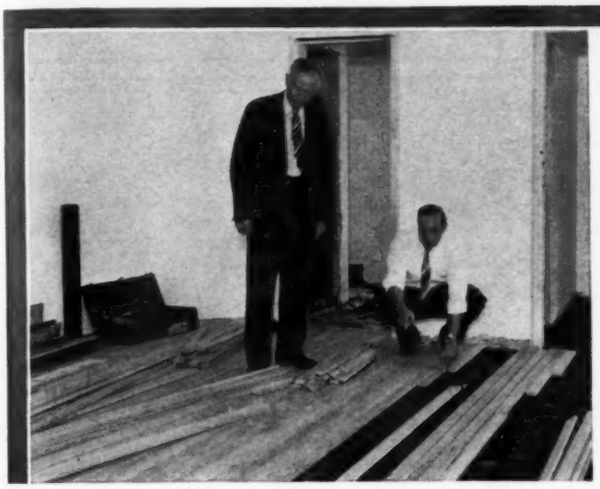
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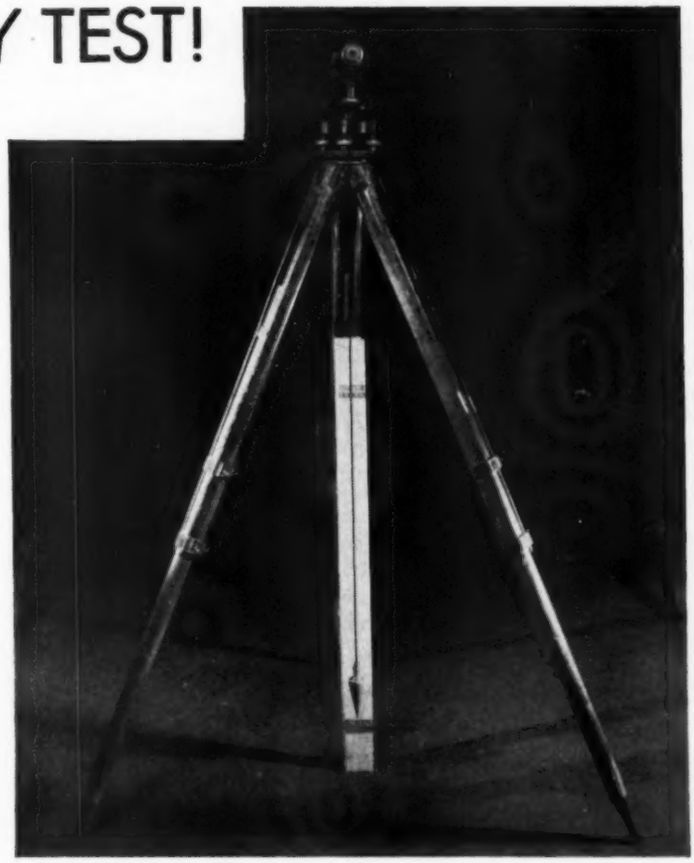
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STRAIGHT-LINE
Oak Flooring

IS STRAIGHT BY ANY TEST!



Not that a surveyor's instrument is a standard device for checking accuracy in oak flooring manufacture: but it proves unerringly that, against the exactness of a plumb line, Bradley STRAIGHT-LINE Oak Flooring scores a perfect "bull's eye."

Floor layers say this Straight-Line feature increases their earnings. Reasons? There's no crook to force out in drawing up . . . no off-angle end joints to correct. Floor layers save time, instead of losing it.

Builders like this faster laying. It protects their own estimates on each installation . . . adds up more finished jobs per season . . . produces more profit per year.

Housing project management and realty developers enthuse over the eye appeal of the exceptional smoothness and beauty of finished Straight-Line floors . . . declare they promote eager occupancy and quick sales.

Home owners take pride in Bradley's Straight-Line floors. That's because their superb smoothness and beauty are protected by the strain-free, flush matching which our Straight-Line feature provides . . . that's why Bradley Straight-Line flooring is the Standard of Comparison in hardwood floors of Oak, Beech and Pecan.

Other Bradley Brand products include: Oak Plank Flooring, Pine Flooring (plain end and end-matched), Oak and Gum Trim and Mouldings, Arkansas Soft Pine Finish and Yard Stock, and a comprehensive line of pine and hardwood specialties.

BRADLEY BRAND

BRADLEY LUMBER COMPANY *of Arkansas*
WARREN, ARKANSAS

On and Off the Record

by Structor

News, Views and Comments

HITLER HELPERS (?)—Leon Henderson has described landlords who sell their houses to "cash in on the war boom" as "Hitler helpers," which puts a lot of perfectly honest and patriotic persons in a tough spot. There's no question but that people who sell houses as a subterfuge to evade rent control should be cracked down on. But on the other hand, every time a home owner decides to sell his house he's not necessarily a "Hitler helper." He may be about to go into the Army, or he may have lost his job or have to move to another town.

One of the largest sellers of homes in the country is the U.S. Home Owners' Loan Corporation. HOLC sold $63,700,000 worth of houses in 1941. In fact, the Federal Home Loan Bank Administrator has just released figures showing that more than half a billion dollars worth of residential real estate "overhang" was sold last year.

SIX MONTHS FROM NOW—Housing shortages are plenty bad in many sections already, but they're going to be a lot worse six months from now.

That's one point private builders have been trying to make with WPB officials. Builders are now trying desperately to keep their organizations together; if they don't get priorities or materials enough to keep going, their organizations will be broken up in much less than six months. Then when the situation gets really acute and a great cry goes up for housing it is going to be a tough situation.

FALLING APART—As a matter of fact—the present priority system appears to be rapidly falling apart, and what is ahead is 100 per cent allocation. WPB's Construction Bureau itself has been unable to make good on promises of materials because Army and Navy demands took everything in sight. Priority ratings have lost their meaning—a double A or triple A isn't worth anything if the materials are not there. It's like writing a check on a bank account that's flat.

SPIRIT OF L-41—Big institutions like life insurance companies and large property owning firms are pretty much on the spot these days, between rent control and L-41. If they don't do what the tenants want they are accused of chiseling on the rent. If they do any work that isn't 100 per cent right under L-41 they know that some day some political smear expert will get them. One official told me that his firm's policy is to try not only to follow the exact letter of the law, but, as far as possible, to obey "the Spirit of L-41." His firm interprets "the spirit" as being "to do absolutely nothing" that can be deferred till after the war. The result, of course, is a great deal of unemployment that is unnecessary and considerable inconvenience and hardship that is equally so. But if you interpret "the Spirit of L-41," you just don't do anything.

A MILLION HOMES A YEAR—The National Resources Planning Board has just issued an extremely interesting pamphlet entitled, "The Role of the Housebuilding Industry," which states that at the right terms and prices and in the right places this country can absorb anywhere from 900,000 to 1,200,000 new dwellings a year, for the decade after the war. I recommend the reading of this booklet to every building industry man as it covers many subjects of interest to those concerned with post-war building. It was written by Miles L. Colean.

OPPORTUNITY—One of the fields where the services of builders are really needed and where they can make a good living is in remodeling to add rooms in defense areas. This is the only field I know of where all the governmental agencies agree. They will all do everything possible and will give it whatever priority assistance is needed.

Numerous examples from defense areas show that such work can be done at a profit both to the builder and the home owner. Take, for example, the case of the small home owner who spent $400 to add two bedrooms and a bath to his house. He immediately rented this space to three officers for $65 a month. FHA terms are extremely liberal for this type of remodeling—up to $5,000 with seven years to pay. Local FHA men will practically break their necks to help a builder or home owner get such a job done, and the only stipulation is that it is within reasonable commuting distance of a defense area.

LONG HAUL—In Duluth, Minn., a large cement plant is running 24 hours a day to produce cement, which is immediately shipped direct to Utah. In Ohio cement plants are busily engaged making cement that is shipped down deep in the heart of Texas. Just another illustration of the effect of war on this industry which formerly considered 500 miles a long haul for cement.

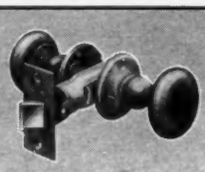
DWINDLING—The announcement some months ago of a merger of Home Builders Institute and National Home Builders Association seems to have been a little premature. The merger is moving slowly, if at all. One problem common to both organizations is a rapid dwindling of membership. It's hard to get members to take an active part and pay dues when they aren't doing any business. Yet there never was a greater need for a strong and effective organization to represent residential builders. When the war ends someone is going to have to be in Washington to see that private builders get a chance to provide the millions of homes needed. My own opinion is that a modified post-war Title VI plan would do the trick.

BOHANNON'S HOUSE—Dave Bohannon, past President of Home Builders Institute, is one of the few large builders of the country still producing houses at a fast rate. He recently completed the 212th and last house in his Sunnyvale tract (San Francisco), and as a demonstration of streamlined operations completed the house in one eight-hour day. He believes that he has demonstrated that a conventional frame house can be built as rapidly and economically as any prefabricated house. He uses a system of jigs and power saw cutting at the site.

POWER OF ADVERTISING—For years I have known all about cold water casein paints—but never bought any. Just recently a number of the largest old-line paint manufacturers have released powerful advertising drives on their "new and revolutionary kind of paint." Some skeptics in the industry said this was merely a move to cover up shortages of paint materials of the most common types that have been used heretofore. But the advertising did not convey that effect. The new paints were full of "amazing improvements—quick drying, no smell, soft-texture finish, easy to apply." Result: sales have boomed. Also, last week my wife marched down to the lumber dealer and bought a gallon, paying a good round price for it too.

America Originated the PARATROOPER!

The famous DEXTER-TUBULAR originated by NATIONAL BRASS



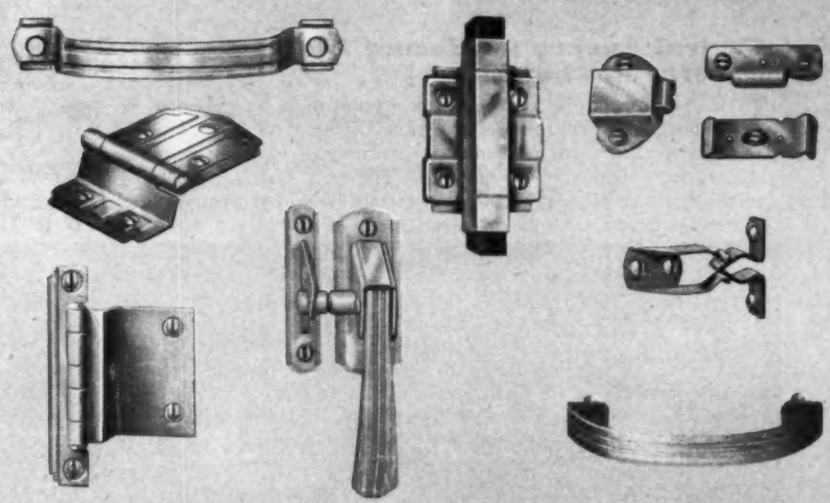
National Brass Originated MODERN CABINET HARDWARE

Smartly designed, practical, positive action ***modern cabinet hardware*** — the offspring of American ingenuity, leadership and foresight that also alertly conceived the offensive surprise of the attacking paratrooper!

This advanced styled line of National Brass ***originated*** cabinet hinges, pulls, knobs, and catches is now available in bright or dull finishes on a highly rust resistant zinc base plating especially processed and finished to resemble chromium. Also available in enamel.

ABINET HARDWARE or WAR HOUSING

National Brass Company advanced CABINET HARDWARE and the Dexter Tubular Commander line conform with the specifications given in the new Builders Hardware Manual of the ***War Production Board*** and can be promptly supplied to those with qualifying rating. If you do not have the Handy Reference Cabinet Hardware, write for your copy. Let us serve you.



National Brass Co. *Mfrs.* **GRAND RAPIDS, MICH.**

BUILDERS HARDWARE — CABINET HARDWARE — SCREEN DOOR HARDWARE

WASHINGTON Review

Latest Rulings Affecting Builders

Cracking Down on L-41 Violators

CITED FOR VIOLATION of the War Production Board's order halting most types of new construction, Herbert C. Huber, Dayton, O., contractor and real estate dealer, is enjoined from completing three houses on which he began work subsequent to April 9, effective date of Conservation Order L-41, according to an announcement from WPB dated Aug. 26.

In addition to prohibiting further work on the houses in question and specifically providing that no application to resume construction will be granted, Suspension Order S-87 denies all priority assistance or allocation of restricted materials to Huber for a period of four months. The denial of priority assistance is applicable to any defense housing project or other construction with which Huber may be directly or indirectly connected or upon which he may be employed.

WPB is currently conducting a nation-wide survey of new building to determine the degree of compliance with its stop-construction order. Penalties will be imposed upon those shown to have violated its terms, the Board promises.

Bank of America Penalized

THE BANK OF AMERICA, San Francisco, has on its hands and cannot finish two partially remodeled buildings which it had intended to occupy as branch offices. The buildings in question, one of them in Vernon and the other at Huntington Park, Calif., will remain in their present incomplete condition for the duration of the war, by order of WPB.

Suspension Order S-84, announced on Aug. 20, charges that the Capital Company, also of San Francisco, acting as agent for the Bank of America, deliberately violated the restrictions imposed by the War Production Board's stop-construction order (L-41) by beginning construction work on the two buildings on April 20, eleven days after the stop order went into effect on April 9.

The suspension order prohibits all persons from continuing the construction illegally undertaken, and specifically provides that no application to resume operations shall be granted.

Central Agency to Procure All Government Lumber

THE ARMY, Navy and Maritime Commission have agreed on the designation of the Construction Division, Office, Chief of Engineers, as a central agency to procure all lumber, the War Department announced on Sept. 3. The new system of lumber purchasing was evolved under the auspices of the Army and Navy Munitions Board, with the cooperation of WPB.

The military services and the Maritime Commission have recently had difficulty in obtaining adequate supplies of lumber, partly as a result of change-overs from steel to wood specifications, which increased the demand for lumber. It is expected that the pooling of orders will bring greater efficiency in distribution, assist materially in increasing production, and result in over-all economies.

Under the new system, the engineers will be procuring well over 50 per cent of all lumber produced in this country. It is estimated that monthly purchases will average 1,250,000,000 board feet during the remainder of 1942. Of the species and grades of lumber, for which the Army, Navy and Maritime Commission have need, it is estimated that the new purchasing agency will be procuring 85 per cent of the total industry supply.

Both the auction and the direct negotiation systems for purchases will be used. A Lumber Advisory Board has been established. The Board includes a representative of the Army, Navy and Maritime Commission. In the event that the Lumber Advisory Board is unable to settle conflicting demands for lumber, the matter will be referred to the Army and Navy Munitions Board Lumber Committee, of which J. P. Boyd is acting chairman. This committee will also evolve ways and means of increasing lumber production in this country, of increasing lumber and log imports, of curtailing non-essential uses of lumber and of conserving lumber in other ways.

New Order on Builders' Hardware

THE WAR PRODUCTION BOARD issued on Aug. 21 a Builders' Hardware Manual listing the size, kind and quantity of builders' hardware that may be used in certain types of construction. This Manual supersedes builders' hardware specifications previously issued by other Government agencies and comprises a set of maxima for the guidance of architects and builders.

In Directive No. 5 the WPB ordered that the manual apply to construction contracted for by the Army, Navy, or Maritime Commission after October 15, 1942, and by the Reconstruction Finance Corporation, Public Buildings Administration and the National Housing Agency after August 15, 1942.

Previous orders restrict the materials which may be used in the manufacture of builders' hardware to some extent, but the manual goes a step further and places restrictions on quantity and type of hardware that may be used in new construction.

Construction covered by the manual includes public type buildings, residential housing, cantonments and similar temporary type buildings, industrial type buildings and buildings for army and navy bases.

Restrictions on residential housing, so far as builders' hardware is concerned, are the same as in the Defense Housing Critical List. Among some of the items that may not be used are the third hinge on doors, push and pull bars on doors, push and kick plates on doors. Most locks will have but one key, although cylinder locks may have two. Most hardware will have a rust-resisting, black finish, since only a minimum of plating will be allowed.

New Trucking Regulations

ODT ORDER No. 17, effective August 1, 1942, makes no change in ODT Order No. 6 for the lumber dealer making local deliveries, except over 25 miles from his municipality. The 25 per cent reduction in total mileage from the corresponding month of the previous year is still in effect.

When delivery is made to destination beyond the 25 miles, the speed limit is forty miles per hour; the 25 per cent reduction in mileage is required; no special deliveries; no call backs; not more than one delivery a day from one point of origin to one point of destination, except under certain conditions.

Over-the-road trucks (beyond the 25 mile limits) must carry full rated capacity loads *in one direction*, with certain exceptions.

(Continued to page 90)

MUELLER *suggests . . .*

a high heating standard

for the house that will win public acceptance in peacetime competition

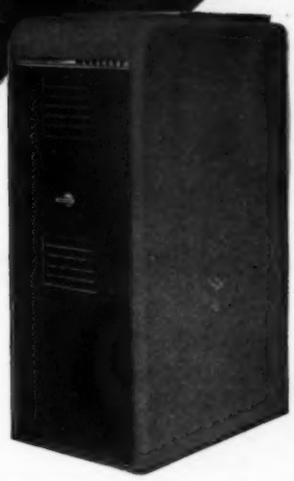


The house of the future — however ingeniously designed — cannot have a broad appeal to the public unless it sets a high standard in heating.

To do so is not difficult. The basic advances have already been made. They require only a wider usage . . . a more complete realization of the vital part heating plays in the all-around satisfaction of your ultimate client, the home owner . . . an expanded market, to make possible the economies of volume manufacture and distribution.

Mueller, for example, has concentrated its engineering facilities over a period of 85 years upon the development of compact, goodlooking heating units to meet the specifications for maximum efficiency. Such units, even for the smallest homes, are practical and proven in use . . . ready for the post-war market.

Mueller at present is devoting a large part of its facilities to war production, while carrying on with such furnace manufacture as is permitted under present restrictions — but Mueller engineers are continuing their program of design and development without interruption. Look to Mueller for continued advances in heating equipment. *L. J. Mueller Furnace Company, 2016 W. Oklahoma Ave., Milwaukee, Wis.* B-10



DESIGNED FOR GAS. Mueller winter air conditioner, completely automatic.

★ ★ ★

BUY WAR BONDS

— save for the future and help the war effort NOW!

MUELLER

Milwaukee

HEATING AND AIR CONDITIONING



DESIGNED FOR COAL. Mueller winter air conditioner, matching attractive appearance of oil and gas units.



DESIGNED FOR OIL. Mueller winter air conditioner, completely automatic.





DINGY BASEMENTS AND DUSTY ATTICS CAN BE TRANSFORMED INTO LIVABLE ROOMS

ANY TIME OF THE YEAR!

THERE are always prospects for adding extra rooms within the home. And neither wind, rain or snow can interfere with their construction.

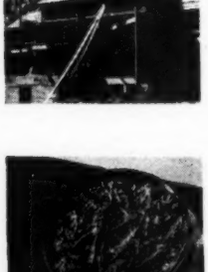
We have been telling this to millions of home owners with Fir-Tex advertisements throughout this year. (See the October issue of *Better Homes & Gardens* for page in 4 colors.)

Cash in on the prospects we have created for you. There are hundreds of potential prospects in your own community. Let them know you are qualified to remodel with Fir-Tex Color Panels. Go to your lumber supply dealer, equip yourself with samples and literature or use coupon below and this material will be sent you.



FIR-TEX
FOR PLASTER BASE

Better Plastering Base. Fir-Tex Insulating Board Lath is the modern and economical way to prepare walls for plaster. This solid insulating plaster base eliminates lath marks . . . greatly reduces plaster cracks.



FIR-TEX
FOR SHEATHING

Better Exterior Sheathing. Fir-Tex Firkote Sheathing seals *out* summer's heat rays and seals *in* wintertime furnace heat. Use on roof and outer walls. Sheathing and insulation in one board, at one cost.



STRONG, NATURAL
WOOD FIBERS

Tough, long fibers from natural wood are thoroughly sterilized and felted together into firm, solid boards. Each square inch of Fir-Tex contains millions of insulating air pockets.

FIR-TEX
INSULATING BUILDING BOARD

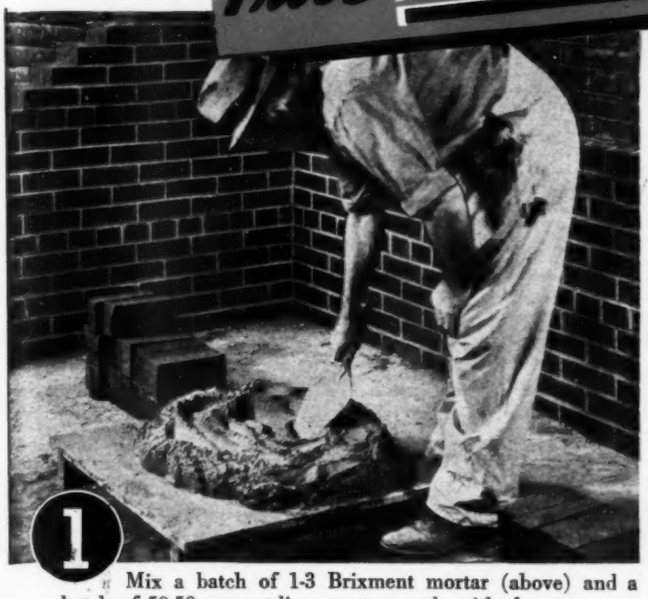
FIR-TEX. Porter Building, Portland, Oregon.
Please send me *free* Fir-Tex samples and literature.

*Name*_____

*Address*_____

*Dealer's Name*_____ AB-042

MAKE THIS TEST — Prove BRIXMENT is BEST!



Mix a batch of 1-3 Brixment mortar (above) and a batch of 50-50 cement-lime mortar made with the same proportion of sand (right). Get any competent bricklayer to test



them on the board—to spread them on the wall—to lay up a few brick with each of the two mortars. Then ask him *which* has the best workability.

BRIXMENT *Assures* *More Economical Brickwork*

Aside from the cost of the brick itself, the most expensive item in masonry construction is the bricklayer's time.

Therefore the most economical mortar you can buy is the one that enables the bricklayer to lay the most brick per day. You cannot afford to give your bricklayer any mortar which causes unnecessary work, such as constant retempering, stooping to the board to replace mortar that failed to stick when he threw up the head-joint, etc.

To secure economical brickwork, the mortar must have excellent workability.

The plasticity of Brixment mortar is *ideal.* It approaches that of straight lime putty. It enables the bricklayer to do faster, neater brickwork, with the brick well bedded and the joints well filled.

This is the principal reason why Brixment reduces the cost of brickwork. But in addition, less labor and supervision are required in mixing. No soaking or slaking. No mortar is wasted. And Brixment mortar makes a neater job that costs less to clean down.

BRIXMENT

For Mortar and Stucco

Louisville Cement Company, Incorporated, Louisville, Kentucky. Cement Manufacturers for Over a Century.

Looking Ahead To The Post-War Home

When America can again build freely, what will the new homes be like?

"—A Much Different, Better Home"

Milwaukee, Wis.

Editor Post-War Home:

Frankly, I have not given very much thought to what the new homes will be like after the war. I have been too much concerned with the utter seriousness of defeating Hitler and the Japs.

I think the only consolation to the person who wants to build a home today and can not because of the war restrictions is that he undoubtedly will be able to have a much different, better, newer home after the war—thanks to what American industry is learning in the way of mass production of new commodities.

Naturally this same situation also applies to automobiles, radios, refrigerators and all other restricted items.

DON S. MONTGOMERY, Secretary,
Wisconsin Retail Lumbermens Assn.

Farmers Will Remodel and Build New

Des Moines, Iowa.

Editor Post-War Home:

So far as the farm is concerned, we see every prospect of a home building upswing after priorities restrictions are removed. We know from going up and down the country roads the average farm house is in frightful shape. If these present farm homes can satisfy their owners after the war, in the light of the progress we know American industry will make, then it is a certainty that they must be extensively remodeled. The farmer being what he is, we would place our bets on a basis of 60 per cent remodeling and 40 per cent new or rebuilding.

In the last two months I have run into four families who have been openly complaining about restrictions, who want to get on with the job of remodeling their kitchen or adding a glassed-in porch, or some other detail that they feel will add to the comfort of farm life. In other words, we face a vast and unsatisfied market in farmers, a market well supplied with cash from present production efforts, and a market which is going to seize upon the best efforts of American designers, architects, and contractors.

There will be a trend away from the oversized farm house of the past; there will be gradual acceptance of line designing rather than period designing. Materials in the farm field will always be influenced by cost of transportation to the farm and, therefore, the lighter ones will predominate. There will be undoubtedly some prefab influence insofar as the second house on the farm goes and to accommodate shifts in quarters for hired help and so on. But, the prefab will be a long time getting a toe-hold as the "main house."

"SUCCESSFUL FARMING,"
Hugh Curtis, Building Editor.

"—We First Must Have a Housecleaning"

Woodville, Ohio.

Editor Post-War Home:

Normal business, more particularly the building business, has been seriously disrupted due to fluctuating costs, the first World War, the 1930-1935 depression, the New Deal, short-lived prefabricated products, and various other causes.

In order to restore normal business, not only in the building game but also on other lines, we first must have a housecleaning of visionary ideas, unworkable ventures, radicalism, greed, and selfishness. People will have to get back to earth, have a little more respect for one another, stop playing petty politics and working one class against another, and discontinue stirring up class hatred and friction between so-called classes, which were practically unheard of in this country prior to 1931.

We should probably take a little time and reflect on the past in order to judge the future. The building business should not be measured in terms of dollar value as compared to the past but rather in terms of volume of building or number of cubic feet.

When costs of labor and material are stable and workmen are contented, there is an incentive to invest dollars in building construction. In years past, when costs were low, houses and other buildings were large, and a large number of men were employed in the building industry in relation to the population and potential needs. In the recent past, with the inflated currency, inflated costs, short hours, strikes, and political pampering of classes for apparently political favors, the quality and size of buildings had to be sacrificed. In fact, today (Sept. 15) it was announced that 1500 prefabricated trailer bodies would be used to house defense workers, instead of providing permanent homes.

Fifty years ago it was a common occurrence for people of moderate means to build homes containing from eight to sixteen rooms. They used the best building materials known to us today, such as stone, brick, rich lime mortar, three coats of plaster, slate or split red cedar shingles, copper valleys, flashing and spouting, etc. Some of these old stone and brick houses erected over a hundred years ago are in good state of preservation, showing the value of the materials used, while some of the cheaper structures erected within the past twenty years appear to be in a greater state of disintegration.

The future in the building business will depend largely on how well we take care of the present; whether we can restore stability and create a condition from the standpoint of business and politics which will inspire building or the investment in homes, office buildings, theaters, churches, factories, etc.

FRED WITMER, President,
The Ohio Hydrate & Supply Co.

Ferguson of FHA Sees Rapid Evolution

Washington, D.C.

Editor Post-War Home:

The post-war home building situation is a difficult one to predict. Following this war we will have to bear a much heavier tax burden than formerly. The influence which taxes may have on construction and on the standard of living of people will be largely dependent upon our national income. If this income can be maintained at a high level the burden will be proportionately smaller and should make possible a steady improvement in the standards of housing for the people of this country.

Disregarding the influence of new taxes we may look forward to a continuation in the development of housing similar to that which has occurred in the past ten years. It is highly doubtful that the immediate post-war house will be radically different from the house which was developed just prior to the present war. Such changes as will be made will probably be evolutionary in nature. There are indications, however, that the process of evolution in housing may be more rapid than in the past.

As a result of the war effort the production capacity of the

(Continued to page 22)

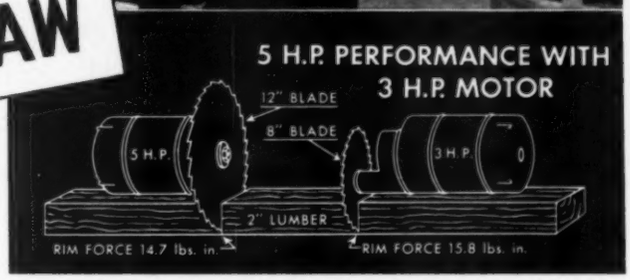


YOU CAN see where you are going when you use a WALKER-TURNER RADIAL SAW. The Ball Bearing Sliding Ram enables you to keep the work in full view at all times. Results—faster, more accurate work and greater safety.

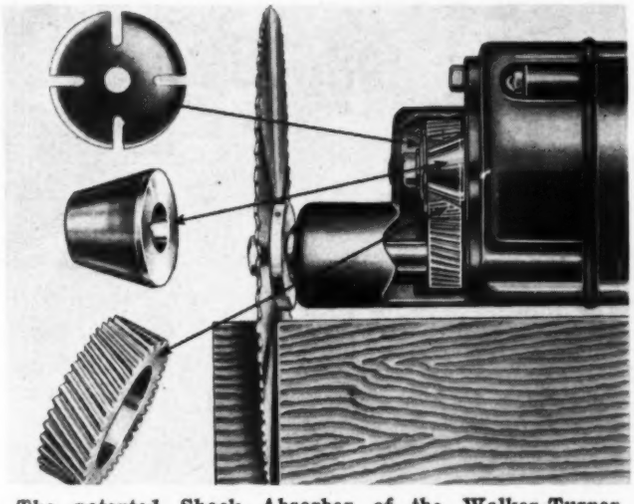
In another way, too, you can see where you are going with the Walker-Turner Radial Saw, because the cost-cutting features insure better than an even break on closely figured war-time contracts.

Price $354.50 f.o.b. Plainfield. Prompt shipment on priority orders. Send for literature.

WALKER-TURNER COMPANY, INC.
10102 Berckman St., Plainfield, N. J.



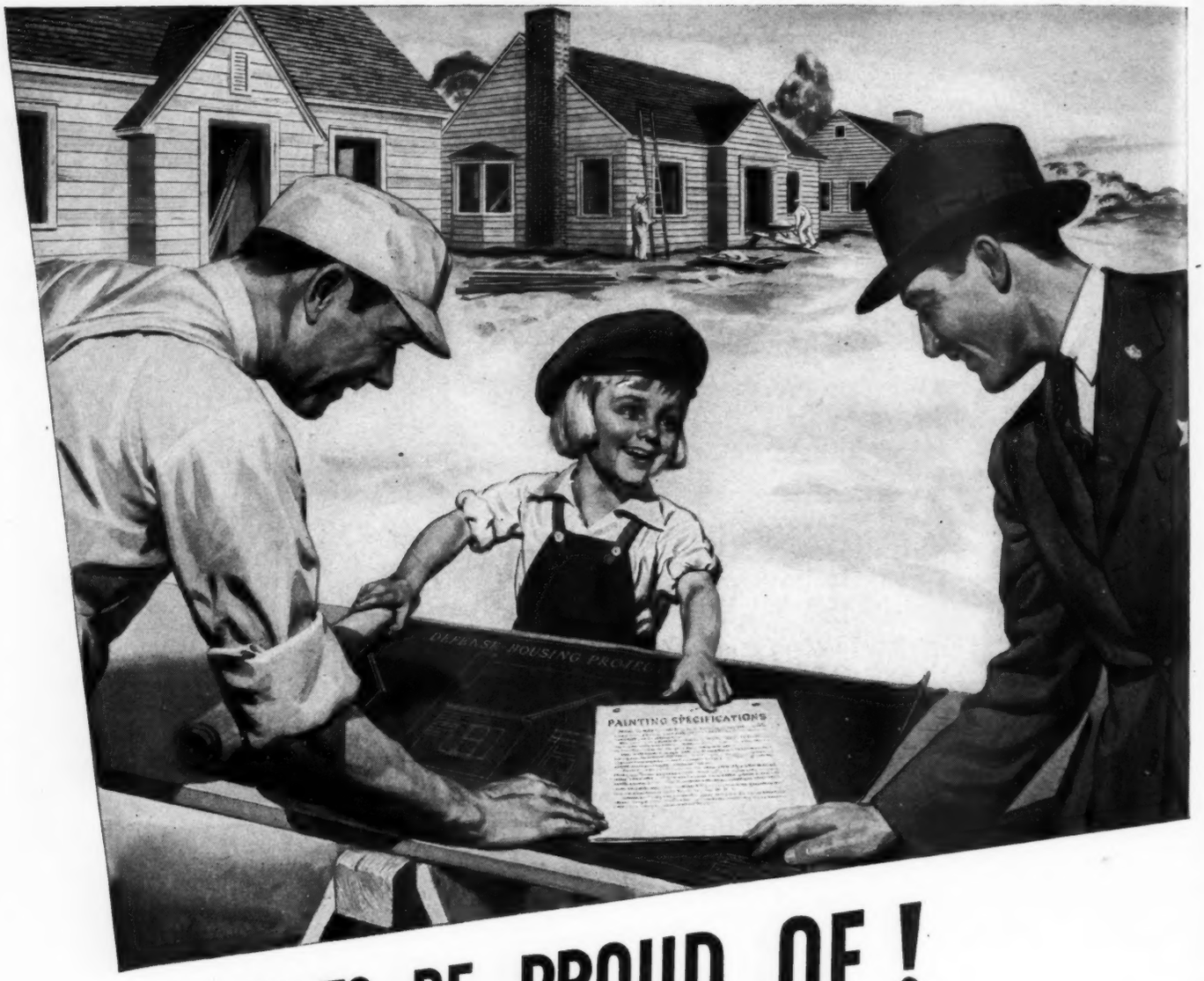
Above diagram shows how Walker-Turner Geared Motor gets shaft closer to work than conventional type motors, permitting use of smaller saws with greater rim force at cutting teeth.



The patented Shock Absorber of the Walker-Turner Geared Motor protects its gears against breakage during momentary overloads. The spring-tempered steel washer, under tension, relieves strains on gears and resets itself.

walker-turner
COMPANY, INC.
PLAINFIELD, N.J.
U.S.A.

WALKER-TURNER RADIAL SAW
FOR CUTTING **METAL · WOOD · PLASTICS**



"A JOB TO BE PROUD OF!

Let Good Paint help keep it that way"

...Fortify Defense Homes with weather-fighting White Lead

In Defense Housing, builders face challenging problems. The need is urgent. The price is restricted. Yet liveableness and weather-resistance must be provided.

It's a job you can be proud of doing right. Ingenuity and skill are needed—not only in the construction itself but in the choice of materials. For, in spite of the price limitation and material shortages, these homes must be built to take it.

That means, when it comes to *paint*, you'll want the sturdiest possible protection. For you know from personal experience that the first line of home defense is good paint. No need to remind you that *good paint's other name is Dutch Boy White Lead*. The years have proved to you that Dutch Boy holds the front like a marine . . . never cracks and scales.

But because cost is such a factor these days we do want to emphasize this:

Dutch Boy is in the Low Price Bracket

Despite its high quality, paint made from Dutch Boy *Paste* Lead is not high in price—in fact, its cost per gallon is actually *low*. And its weather-defying durability means substantial savings per year of protection.

Another economy point: Dutch Boy is an *all-purpose* product—it can be used for either two- or three-coat painting, and on any surface—wood, brick, stucco, concrete or plaster.

New Dutch Boy Paint Outstanding for Two-Coat Sealing and Hiding

When it comes to paint that's ready-mixed we invite you to pass professional judgment on the new Dutch Boy Pure White Lead *Paint*.

It combines the inborn stamina of White Lead with sealing, hiding and whiteness unsurpassed by any two-coat combination on the market. Its two special forms—Exterior Primer and Outside White—are both pure white lead, ready to spread. Together they give results on either new or old wood that will be a credit to you and the nation.



NATIONAL LEAD COMPANY
New York, Buffalo, Chicago, Cincinnati, Cleveland, St. Louis, San Francisco, Boston (National-Boston Lead Co.), Pittsburgh (National Lead & Oil Co. of Penna.), Philadelphia (John T. Lewis & Bros. Co.).

SPECIFY DUTCH BOY PURE WHITE LEAD



USE "PENNVERNON"

. . . NOT JUST "WINDOW GLASS"

● A good window glass should be clear, brilliantly finished on both sides of the sheet, as free as a sheet glass can be of imperfections and distortions, and dependably capable of permitting satisfactory vision through it. To an exceptionally high degree, Pennvernon Window Glass meets these requirements. The Pennvernon label is a reliable guide to window glass of genuine quality. It also identifies a glass readily and promptly available anywhere in the land through our many branches and thousands of dealers. Pittsburgh Plate Glass Company, Grant Building, Pittsburgh, Pennsylvania.



PENNVERNON WINDOW GLASS
PITTSBURGH PLATE GLASS COMPANY
"PITTSBURGH" stands for Quality Glass and Paint

LOOKING AHEAD To The Post-War Home

(Continued from page 18)

country has been tremendously expanded. We may anticipate that industry will convert this war capacity to peacetime needs, and housing provides a potential market for this capacity. For instance, our aluminum production has been trebled. It is reported that we may also anticipate a sharp drop in cost which will widen the market for the use of this material in building construction.

Before the war plywood was making advances in the construction field and is in extensive use now. Its development in connection with transport and training planes gives further indication that it may play a large part in the post-war house.

Magnesium is an almost new material with many potential structural and other uses in the field of housing.

The field of plastics with its increased capacity also offers much which may be developed in the field of housing. In addition the development of synthetic materials, such as substitutes for rubber, will probably produce potential new materials for house construction.

The research staffs of these industries are being put to work to find products to market their excess production. What may develop is difficult to determine now but we may look forward to the use of these resources in the development of new materials, equipment and methods of construction which will gradually affect our houses.

The construction industry itself has been largely affected by the war effort. Many large construction organizations, heretofore unacquainted with the field of housing, through their war contracts have been initiated in this field. Prefabrication has received a tremendous impetus because of war housing construction. I feel that as a result of this the traditional inertia in the home construction industry toward new materials, equipment and methods of construction, may be minimized to the extent that we may expect more rapid adoption of newly developed items and processes.

Side by side with this development of the house itself, there will undoubtedly be an intensification of the neighborhood planning that has characterized the market during the last five years. New neighborhoods in the future will follow the expanding growth of existing communities. Many of them will be located where adequate utilities are available either on the site or close at hand so that connections can be made with existing utility lines located within a reasonable distance of the tract being developed. These new neighborhoods will have housing so grouped that they will produce in many instances a self-contained neighborhood. As a result of careful planning these new neighborhoods will conform to the master plan for the city. They will recognize the major traffic street plan and at the same time discourage dangerous through traffic. These new neighborhoods will conform to comprehensive zoning ordinances and well prepared subdivision regulations. This will stabilize the city's growth in this area and provide homes with architectural merit. There will develop pride of ownership and neighborhood residence.

In post-war developments the houses will be in a price range and of a type that properly fits in to that section of the city. Parks and playgrounds will be provided. School and other public building sites will be available. Transportation facilities will be adequate. Drainage problems will be carefully handled. New shopping centers will be available. These new neighborhoods will have adequate street improvements at a minimum cost. Good size lots for homes will be provided in a price range meeting a known demand which will increase their marketability.

There are many localities throughout the country in which wartime construction has been restricted if not altogether halted. These localities will experience the construction of new neighborhoods, properly planned and developed to fill a long felt need. These developments will take into consideration the future growth of the city and will be based upon well prepared comprehensive city plans which will recognize the most recent thought in community development.

The second type of new neighborhoods that will come into existence in the future will be found where in-town parcels of land are available for rehabilitation. Many old structures will have reached the end of their usefulness and new group housing will be possible in these areas. Utilities, street improvements, transportation and city conveniences will already be available. These projects will prove sound investments and will prevent continued haphazard growth of our cities. It is believed that such housing of the future will incorporate the most recent features now being developed in neighborhood construction. Problems experienced and solved all over the country in the housing of war workers will be of great value to the in-town housing of workers. Sound use of land will be given thorough consideration from a housing standpoint as it never has been given before. Properties that have been dormant or of questionable income value will find a new use and builders will eagerly approach this problem from a viewpoint that has been given very little consideration before now.

When America can build freely again we may hope to see new neighborhoods developing into desirable locations properly protected and serving the large majority of our citizens needing housing in normal times. These projects will take care of the city dweller as well as those who wish to live in the open spaces so satisfactorily available in America.

ABNER H. FERGUSON,
Commissioner, Federal Housing Administration.

Will a Demountable House "Demount?"

Seattle, Wash.

Editor Post-War Home:

After being demounted three times, the famous "Cotton House," which received nation-wide publicity over a year ago when it was exhibited in Washington, D.C., has now been re-erected for the *fourth* time—this time as a permanent dwelling in Falls Church, Virginia.

This experience seems to answer the question, "Will a demountable house actually 'demount'?" And it is a tribute to materials used that this house is in almost perfect condition, even though it lay demounted for nine months, exposed to rain and snow, with only a light tarpaulin covering. The outside walls, of exterior-grade plywood, which were coated with Rezitex, synthetic-resin paint, were found to be in such perfect condition that they required no additional painting. In spite of the severe exposure to the weather, the inside walls and partitions (of water-resistant plywood) decorated at the factory with Plasterez, synthetic-resin paint, were found to be in good condition, and only required a coat of paint. The five-room "Cotton House" was factory-built by The Speedwall Company, Seattle, to demonstrate the use of cotton as a fabric covering for outside and inside plywood walls, and was first erected and re-erected in Seattle. It was then demounted and re-erected in Washington, D.C., by a crew who had never seen anything like it before, and exhibited in May, 1941, in the Patio of the Administration Building by the Department of Agriculture.

The demountable feature of this house was a forerunner of the demountable type of dry-built defense homes being constructed throughout the country today. The house is of modified Colonial design, dimensions 32' x 24', and used 4500 square feet of cotton to cover the fir plywood walls and ceilings. The cotton was affixed to the face of the panels by using Laucks waterproof synthetic glue.

To make the "Cotton House" more permanent, the present owners have provided a cellar and masonry foundation on which the floors, walls and roof were placed in 180 man-hours, using unskilled labor. No doubt such a demonstration will have its influence on the post-war home.

I. F. LAUCKS.

Will post-war home building be private-enterprise home building or will the "public housers" in Washington take over, to put everyone into a government-owned home unit?

And what will the post-war home be like?

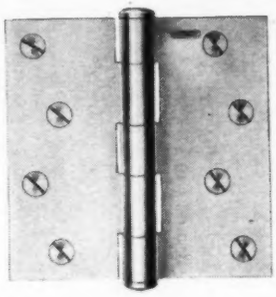
What are YOUR ideas?

Write this Department; the Editor wants to hear from you.

STANLEY HARDWARE

that meets specifications of the

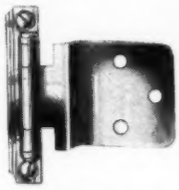
DEFENSE HOUSING CRITICAL LIST



242P Butt (2014½P). Wrought steel, primed for painting. Sizes 3½" x 3½", and 4" x 4".



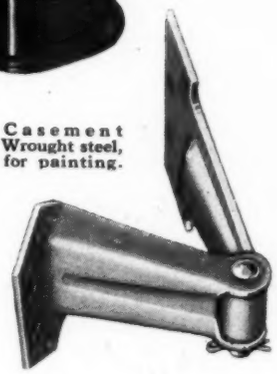
1565P 1½" Hinge. Wrought steel, primed for painting.



1521P Semi-concealed Hinge. Wrought steel, Japanned finish.



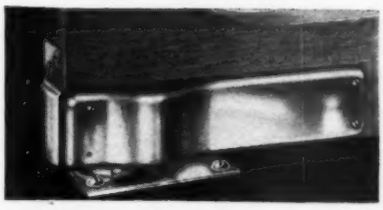
158J Spring Hinge. Japanned finish.



267P Casement Hinge. Wrought steel, primed for painting.



908J 12" (2209 Steel Pin US1B) Extra Heavy T-Hinge. Wrought steel, Japanned finish.



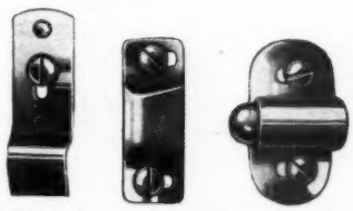
055P Floor Hinge, double acting, ball bearing. Wrought steel, primed for painting.



476K Pull. Wrought steel, Zinc plated.



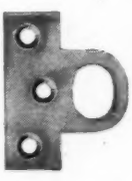
465K Pull. Wrought steel, Zinc plated.



33K Spring Catch, for lipped or flush doors. Wrought steel, Zinc plated.



1252J (1189A) Latch. Wrought steel, Japanned



1245J (1430 US1B) Padlock Eye. Wrought steel, Japanned finish.

1055J 6" (1022B) Chain Bolt. Wrought steel, Japanned finish.



1056J 6" (1049B) Foot Bolt. Wrought steel, Japanned finish.





379J1 6" (1060A US1D) Surface Bolt. Wrought steel. Dead black



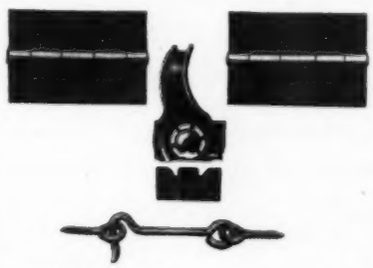
1010 12" (1051A) Cane Bolt. Wrought steel.



1724J (1825 US1B) Screen Hanger. Wrought steel, Japanned finish.



486J1 (1201A US1D) Hook Sash Lift. Wrought steel, Dead black finish.



1761J Cellar Window Set. Wrought steel, Japanned finish.

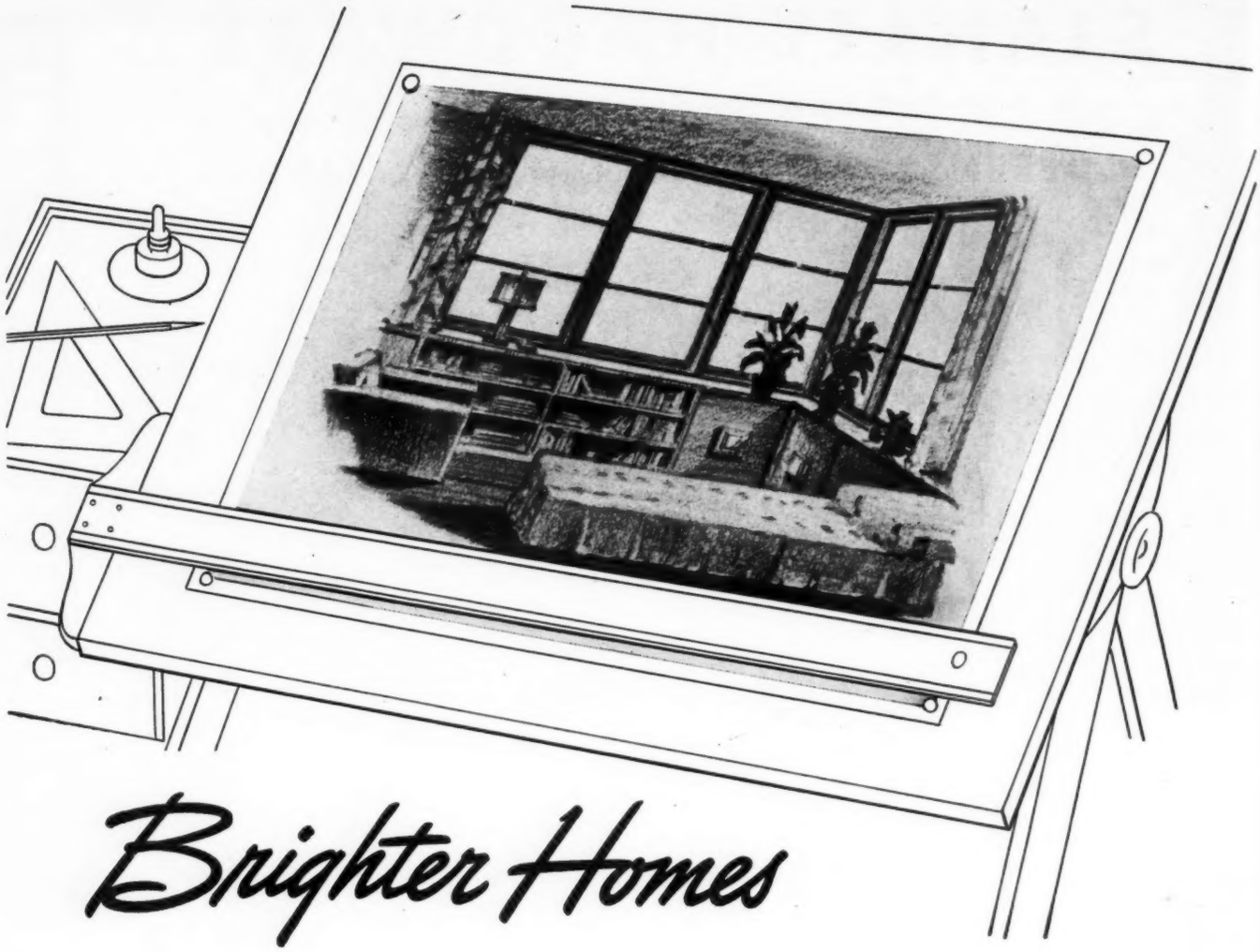
STANLEY

TRADE MARK

These are the Stanley Hardware items which meet the specifications of the Defense Housing Critical List. Orders for any of these items, accompanied by proper priority certification and End Use symbol, will be handled promptly. Keep this page handy for ready reference. The Stanley Works, New Britain, Connecticut.

IMPORTANT INFORMATION for BUILDERS

CUT OUT AND FILE THIS PAGE



Brighter Homes

are on Tomorrow's Planning Boards

One thing sure about tomorrow's homes, they're going to be made brighter and more livable through use of larger window areas, and through installation of many new glass features.

Picture and corner windows, which were becoming an important part of architectural design in pre-war days, promise to be even more prominent in tomorrow's homes. The opportunities these windows offer for added spaciousness, sunlight and cross ventilation open the way to new possibilities for better living.

More generous use of built-in mirrors in every room of the home also will open the way to greater livability. Recent surveys made by Libbey·Owens·Ford reveal that practically every homeowner desires more mirrors.

New applications of decorative glass in outside walls and interior partitions promise to provide another practical way of increasing natural light in rooms and hallways . . . will add substantially to decoration possibilities.

The opportunities of designing and building *better* with glass are endless. May we send you our new booklet, "Practical Glass Ideas," which contains many interesting suggestions? Write Libbey·Owens·Ford Glass Company, 1207-A Nicholas Building, Toledo, Ohio.

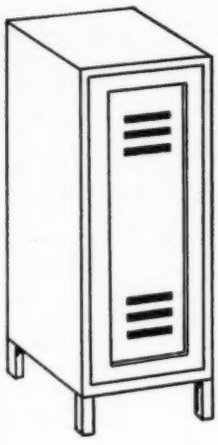
L O F

LIBBEY·OWENS·FORD

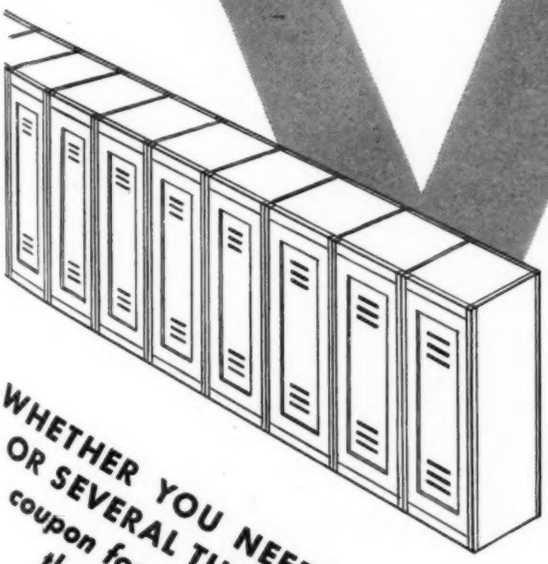
QUALITY *Flat Glass* PRODUCTS

HERE'S THE "V" ANSWER TO YOUR LOCKER NEEDS

—NEW CURTIS VICTORY LOCKER



You need lockers today—lockers for factories, schools, military establishments, industrial and commercial buildings of all types. You need those lockers quickly—and with the complete assurance of quality and lasting satisfaction. And so Curtis offers their NEW Victory Locker, with all the quality, all the superior features you would expect in a Curtis product.



WHETHER YOU NEED ONE LOCKER OR SEVERAL THOUSAND, send the coupon for full information about the Curtis Victory Locker

Check These Advantages of the CURTIS VICTORY WOOD LOCKER:

1. An all-purpose locker to fit every locker need.
2. Uses no critical materials—made of plywood panels dovetailed into Ponderosa Pine framework.
3. Standardized design and size—
   15″ wide, 18″ deep, 65″ high, with legs.
   15″ wide, 18″ deep, 60″ high, legs removed.
4. Shipped KD with complete installation instructions.
5. All parts pre-fit for quick, easy installation.
6. Low installation cost due to Curtis Lock-tite joint used to assemble batteries of lockers.
7. Each locker consists of paneled ends, back panel, front panel including door, bottom shelf, hat shelf, top, and divider partition.
8. Painted two coats—olive green.
9. Light—durable—strong.
10. Available as individual units or in batteries of any desired number.
11. Backed by 76 years of experience in woodworking and cabinetry—made by the makers of *Curtis Woodwork* and *Silentite Windows.*
12. Quick delivery, due to Curtis high speed mass production.

CURTIS COMPANIES SERVICE BUREAU
Dept. AB-10L, Curtis Building, Clinton, Iowa
Gentlemen: Please send me complete information about the new Curtis Wood Victory Locker.

Name.....

Address.....

City.....*State*.....

1866
CURTIS WOODWORK

MAKERS OF FINE WOODWORK FOR 76 YEARS
SOLD BY LEADING LUMBER DEALERS EVERYWHERE

Letters from Readers

Facts, Opinion and Advice Welcomed for This Department...Write the Editor

Accurate Information Courteously Given

New York, N. Y.

To the Editor:

This is a letter of thanks.

This morning I wanted confirmation of information about the amendments to L-41. So I phoned the *American Builder*. Not only did I receive the information I requested but the friendliness and courtesy of the young lady with whom I talked was also appreciated.

Thank you.

NORM ADVERTISING, Inc.,
Signa Ford.

Plan Lumber Production Drive

Washington, D. C.

To the Editor:

As you well know, there is a very serious shortage of lumber and since lumber is a vital war material, the shortage is critical and becoming more critical each day. Estimates today indicate 1942 lumber production approximately thirty-two billion feet and estimated demand requirements, thirty-eight billion feet after eliminating less essential requirements. A large part of the increased demand comes from manufacturers forced to turn to wood as a result of steel having been denied to them for use in manufacturing items for which steel has been used for many years.

The objectives of the Lumber Production Drive (soon to be launched by WPB) are:

(1) Increase production.

(2) Reduce consumption through conservation.

A comprehensive and complete campaign is being mapped out to convince the people of the United States that lumber is a war material and that there is a critical shortage; furthermore, that it is patriotic to produce lumber, patriotic to work in the Lumber Industry, and patriotic to conserve lumber and not waste it.

The Lumber Publications can be of great assistance in the War Effort by bringing to the attention of their readers continually the facts regarding the lumber shortage. In 1909, the Industry produced forty-four and one-half billion feet of lumber. In fifteen years of the past thirty years, the annual production was higher than it will be for 1942, and it is our opinion that when these facts are given widest publicity, there should be a big increase in production. Owners of timber ripe for cutting should get in touch with sawmills buying and cutting timber; rationing boards should be more aware of the urgent need for tires on lumber trucks instead of for pleasure cars; labor will be more willing to work longer hours; and mills will be more willing to cut their growing timber if proper publicity is given to the urgency of the war needs for lumber.

Lumber Advisors or Lumber Administrators are being appointed to headquarters in various lumber areas and will act as media for the clearing of necessary information between timber owners, sawmillers, and lumber buyers and to give assistance to anyone requiring financial help from the Reconstruction Finance Corporation, etc. This is a step in decentralization of the War Production Board to give more direct contact with the Industry and facilitate prompt handling of all needs.

We suggest that you contact this office as often as you have questions in mind which we might answer to help you push this campaign.

NATHANIEL DYKE, JR., Consultant,
War Production Board.

To Influence Legislators

Syracuse, N. Y.

To the Editor:

If it is possible and you have copies available of the August issue of *American Builder*, will you send me three or four copies? I am very much interested to bring some of the articles to the attention of certain legislator friends of mine, and would like to use them for that purpose.

POMEROY ORGANIZATION, Inc.,
By Donald T. Pomeroy, President.

Used Iron Pipe Available

Cincinnati, Ohio.

To the Editor:

If any repairs are necessary on platforms and steps, on private dwellings or on the interior of industrial plants or public institutions on which a preference rating is not obtainable, we would appreciate if you would advise us your problems. We have located a source of supply where used pipe is obtainable; when painted with a rust preventive coating it cannot be detected from new pipe.

As any kind of *used materials* can be furnished without a preference rating we have stressed pipe for we have a large supply on hand.

CINCINNATI IRON FENCE CO., Inc.,
E. E. Franklin, Secretary.

"Worthy to be Read"

Dallas, Texas.

To the Editor:

Find enclosed renewal subscription slip with check. For many years I have read the news in the *American Builder;* found it full of real good business knowledge, plus some fine editorials, knowledge worthy to be read by all concerned with the building art.

PHILIP FISCHL, Investments.

Scrap the Old Light Fixtures

Jersey City, New Jersey.

To the Editor:

You have been so cooperative with us in the past that any opportunity to return your favors cannot be refused. We now suggest editorial mention on the prospects and possibilities of refixturing. We have attempted to encourage our own dealers and distributors along such lines especially since we feel that new equipment will not only give better light and use practically no materials that are critical but make available for scrap and salvage millions of pounds of brass, copper, aluminum, iron and steel from which old style fixtures were mainly consructed.

Here are some of the materials we have furnished to our dealers for them to use as local publicity.

"SUGGESTED COPY FOR DIRECT MAIL 'GET IN THE SCRAP'

"Dear Mrs. Homeowner:

"If you're in any way unhappy with your old lighting fixtures —and most people are—here's a suggestion you'll find both patriotic and practical.

"The fixtures of five, ten or fifteen years ago were made of bulky heavy metal—iron, steel, copper or brass—metals that our country badly needs to make ships, tanks, guns and planes.

"By turning in these old fixtures and selecting new Light-

(Continued to page 30)



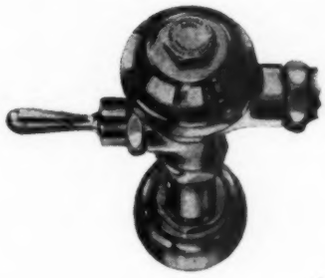
START PLANNING *NOW* FOR SLOAN-EQUIPPED HOMES

★ ★ ★

FOR 36 years Sloan engineering has made and kept Sloan Flush Valves the world's standard of excellence. You will find them today in luxury homes, apartments, clubs, hotels, hospitals, schools, and all types of large buildings everywhere. During all these years Sloan Flush Valves have protected health by preventing back-syphonage. They have saved both water and the power cost necessary to pump it. They have always been amazingly low in maintenance cost.

Now, thanks to Sloan engineers, we are able to make this promise:—*after the war Sloan Flush Valves, with all their inherent advantages, will be available to even the modest homes.*

Sloan-equipped homes are the ultimate in convenience, health and economy. Start planning now for Sloan-equipped residences. Remember: there are more Sloan Flush Valves sold than all other makes combined.



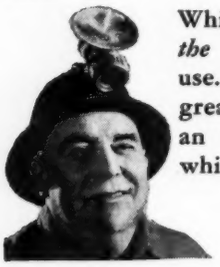
SLOAN VALVE COMPANY

4300 WEST LAKE STREET · CHICAGO

You can be glad there's
NO SHORTAGE of "WAR PAINT"!

FORTUNATELY for the building industry, there is at present no shortage of white lead. Not only is there enough available for all civilian as well as military needs — but its uniformly high quality remains unchanged.

This means you can go right on specifying *pure white lead paint,* to give your buildings long-lasting protection and beauty at no premium in cost.



White lead paint is *the* "war paint" to use. In addition to its great durability, it has an "elastic" quality which prevents cracking and scaling. And it saves material and maintenance costs by spreading them over extra years of service. Yet white lead paint costs no more than regular quality paints.



WHITE LEAD FOR DEFENSE HOUSING—More and more, white lead is being specified to give lasting beauty to low-cost housing. Pictured here is part of the Colonial Village development near Batavia, Ill. Architect: Edgar Hanebuth. Builders: Edward S. Reque Organization, West Chicago, Ill.

• • •

From every angle beauty, protection and economy — white lead paint proves that "the best is cheapest."

• • •

LEAD INDUSTRIES ASSOCIATION
420 Lexington Avenue, New York, N.Y.

INFORMATION FOR BUILDERS — Pure white lead is sold by paint stores in two different forms: (1) as a paste, commonly known as "lead in oil," for use in mixing pure white lead paint to order for each job; (2) as pure white lead paint in ready-to-use form, in popular-size containers. You are not confined just to white—white lead can be tinted to a wide range of colors.

White lead is also the backbone of other quality paints. In buying exterior paint it is a safe rule to follow: *"the higher the lead content, the better the paint."*



GET THIS FREE GUIDE *to better painting. Send today for valuable booklet* "WHAT TO EXPECT FROM WHITE LEAD PAINT" *containing complete information about low-cost quality painting on all types of surfaces.*

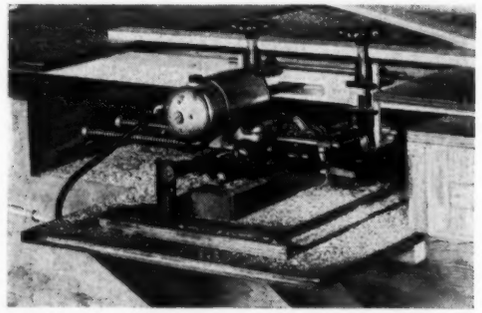
LAYOUT for fitting doors . . . . FAST!

Here is one way to cut your costs on fitting doors and attaching hardware. The application of the proper Carter Equipment to this layout will cut weeks on a big job.



A. Beveling lock side and sizing door to width–Carter R5A Routers with spiral cutters – one on each side of door – the one below bench with cutter tilted to bevel lock side of door.

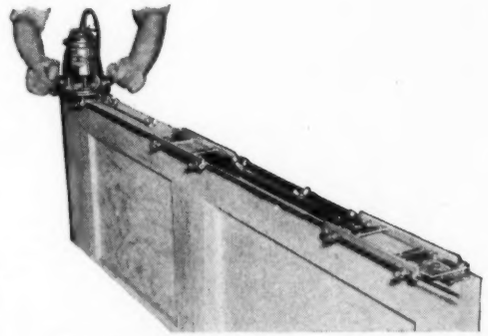
B. Radial Saw–saw top of door–move to stop, saw bottom of door to length.



C. Carter Lock Mortiser mounted in horizontal position.



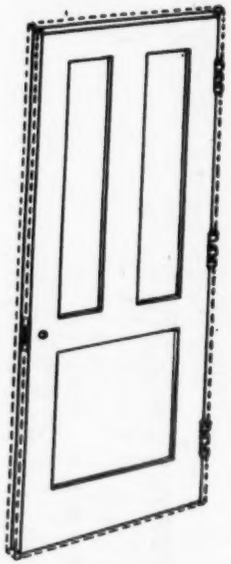
E. Rout out for lock face plate, T1 templet hinged to bench. Use Carter Butt Router.

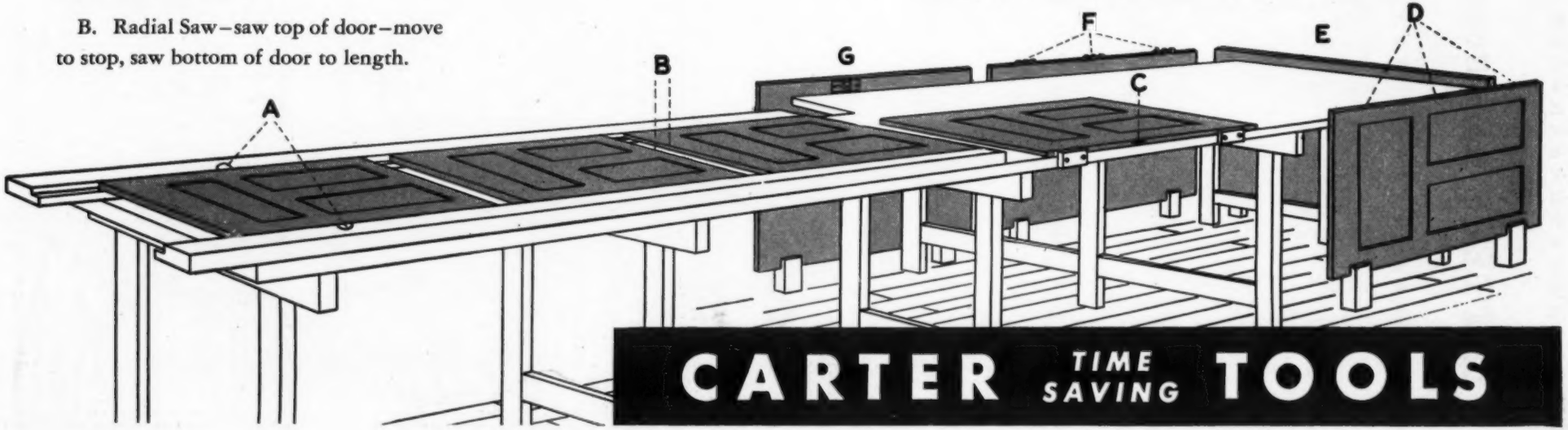


D. Rout recesses for butts. Door on edge, T3 templet hinged to bench. Use Carter Butt Router.

F-G. Assemble hardware. (F) Butt Halves. (G) Locks – use Stanley Electric Drill and Screw Driver.

R. L. CARTER DIVISION – The Stanley Works, 133 Elm St., New Britain, Conn.





CARTER TIME SAVING TOOLS

★★★★★★★★★★★★★★★★★★★★★★★★

LETTERS *from Readers*

★★★★★★★★★★★★★★★★★★★★★★★★

(Continued from page 26)

oliers, made with but a fraction of the metal used in your present equipment, you'll speed up the Victory Program and you'll enjoy better light, use less current, and add beauty to your room as well as satisfaction in your heart.

"We take down your old fixtures and install new equipment without extra charge—and, of course, the metal in the old equipment goes to Uncle Sam!

"Sincerely,
"(Dealer's Name)"

ROBERT FISH,
for Lightolier.

"Residential Chicago" a Valuable Book

Chicago.

To the Editor:

"Residential Chicago," a 528 page book recently published by the Chicago Plan Commission, is the first volume based upon the findings of the Chicago Land Use Survey. The Survey began in 1938 as a Work Projects Administration undertaking with the City of Chicago as the sponsor under the direction of the Chicago Plan Commission. The book presents summaries of city-wide and community area data on residential land use and offers the most complete statistical information now available on the physical, social, and economic character of residential properties in Chicago. A series of maps in color show the following housing factors block by block; Age of Residential Structures; Condition of Dwelling Units; Conversions; Sanitary Facilities; Encumbrance Status; Extent and Duration of Owner-Occupancy; Persons per Room; Race of Household; and Type of Housing Area.

The vital need for the facts and conclusions embodied in "Residential Chicago" has long been felt. The volume is being received enthusiastically by many governmental agencies; city-wide and local community civic groups; real estate dealers, managers, and builders; merchants; and property owners. The Chicago Plan Commission has been making excellent use of this wealth of information in offering assistance in meeting many war time problems as well as in the preparation of the Master Plan for Chicago. The value of the Land Use Survey data in the task of post-war construction and rehabilitation cannot be overestimated.

"Residential Chicago" is attractively bound in cloth in an edition which was necessarily limited for fundamental reasons of economy. Reference copies are available in the Public Library and its branches, University and High School Libraries. Single copies are on sale at the Municipal Reference Library in the Chicago City Hall, for $2.00, postpaid.

T. T. McCROSKY,
Executive Director, Chicago Plan Commission.

Sash Balanced on One Side Only

Los Angeles, California.

To the Editor:

For many years this company has marketed the popular "flat type" Acme-Twin Sash Balance which is actually two balances in one unit. Our showings in Washington brought out the authorized specifications permitting the counterbalancing of sash by a spring balance on one side only. We convinced many officials who had never seen or heard of such an idea that *The Impossible* could be done, and had been done for many years past.

Soon after this conversion an addenda, covered in Paragraph C, appeared allowing such "Single Installation" in federally financed housing when an equalizer or compensating device was installed in the sash opposite the balance. This type of installation was permitted on windows not exceeding 2 ft. 10 in. in width. On wider windows two balances per sash were required, without the equalizers.

We are glad to note that other manufacturers of sash balances have all switched from the *can't be done* attitude to our way of thinking; because we have been doing it for about sixteen years.

This Acme-Twin sash balance we like to talk about has never weighed more than one and a half pounds per unit and has done more to reduce the amount of critical materials in a set of sash balances than any other factor. In peace as well as in war they were tops in performance and we have not reduced their streamlined proportions in the emergency. There is nothing to reduce.

THE ACME SPRING SASH BALANCE CO.,
Royal R. Moss, Sales Manager.

This Is a Fixer's Paradise

Fort Atkinson, Wis.

To the Editor:

Now is the time for all good fixers to come to the aid of their country.

This nation becomes a fixer's paradise what with governmental orders to limit, restrict, restrain, and in some categories, stop major building operations on the one hand and with encouragement from the same source to save, conserve, keep, and cherish what structures we now have on the other hand.

The best building supply dealer fixers are now going from house to house and farm to farm pointing out urgent needs for building repairs and taking orders at so much per job for the completed work. Incidentally, the non-competitive nature of the work to be done puts it in the black to such an extent that fixer-uppers are finding it more profitable than normal business and, therefore, lots more fun.

To be sure, there are not many who have yet sensed the golden opportunities of the "fix it" business. Those who have discovered this gold mine are having things pretty much their own way. Take the farm, for example, where because of the numerous buildings the best opportunities exist. It is a rare farm where it is impossible to find some building that does not need repairs and, in most cases, badly.

The professional supply dealer fixer sees and points out these needs quickly and, just as quickly, gives a price on the job completed. In a few days his "fix it" crew follows in, gets the job done, and moves to the next farm. Likewise, the hundred and one things that need fixing around farm buildings and inside of them come readily to the mind of any alert dealer and need not be cataloged here. Their method of successfully seeking out and closing this business is equally clear to the wide awake merchant.

From the government itself comes the encouragement to conserve and the good farmer looking for a place to spend his money wisely and to good purpose quickly recognizes the need. All that farmer needs is someone to show him how his buildings may be repaired and what the complete job will cost. He will act quickly enough if the suggestions and estimates are properly done.

This year and next and perhaps the following year will find farmers with the greatest income in all history. They can't spend the money for much new machinery and equipment or much of anything else that's new. They'll have money to spend, however, lots of it, and they'll spend it for anything useful.

For years, farmers have looked at their buildings that need patching up;—at interior equipment calling for some minor repairs;—at cow sheds, pig sties, and chicken houses that would be better for a little insulation and ventilation;—at doors and windows needing attention;—at odd corners which may be used for an extra cow or two, or a few more pigs and hens;—at sills rotted out, siding and roofing that needs patching. All these and dozens of other urgent needs are to be found on every farm and smart building supply dealers are going to be out there fixing them up.

Farmers are completely buried under farm work. They haven't time to do this repair work themselves but they'll welcome intelligent suggestions from supply dealers who have the crews to take over and complete the job. Yes, indeed, this is the fixer's paradise.

R. G. GARDINIER,
Gen'l Sales & Adv. Mgr.,
James Manufacturing Co.

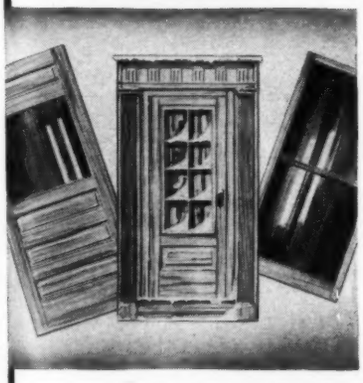
TO HELP YOU SERVE THEM TODAY AND TOMORROW





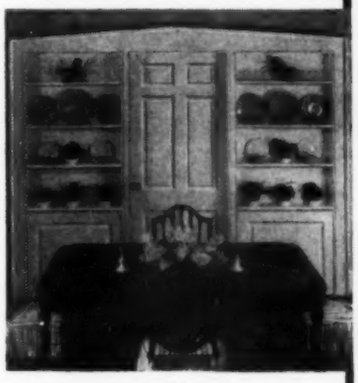
WAR-TIME conditions have created for you two basic problems in serving the home-loving families of America. First, how can you best serve them today, when expenditures have necessarily been cut to the bare minimum? Second, how can you serve them tomorrow . . . when they build the post-war home of their dreams? Ponderosa Pine Woodwork can help you to a better solution of both of these problems. Here are a few reasons why . . .

TODAY



FUEL CONSERVATION IS A MUST. One of the easiest and best ways to conserve fuel is by installing storm sash, storm doors and combination doors of Ponderosa Pine on *every* outside opening of the home. Ponderosa Pine has natural insulating qualities—excellent weather resistance.

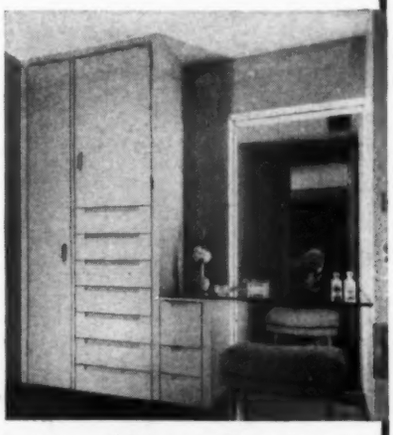
"DOUBLED UP" FAMILIES must have space for living. Growing children—war workers—must be accommodated. Here, at very low cost, doors and shelves of Ponderosa Pine were a major aid in filling in an archway to create an extra room, thus taking full advantage of space formerly wasted.



TOMORROW



NEW CONVENIENCE will make tomorrow's home more livable, more comfortable. Note how, in the room at right, sliding trays of Ponderosa Pine replace the conventional type of drawers. Much of such work can be done with Ponderosa Pine today—more of it will be done tomorrow.





FOR THE DURATION—AND AFTER—you'll need the new "Open House"—32 pages of suggestions on making wartime homes more livable and more useful—as well as for tomorrow's future planning. Your free copy is waiting. Write Ponderosa Pine Woodwork, Dept. XAB-10, 111 W. Washington St., Chicago, Ill.

MORE LIGHT AND AIR are a "must" for the homes of tomorrow—and that means more Ponderosa Pine windows! In the room above, see how the generous corner of Ponderosa Pine windows permits health requirements to be satisfied at low cost. What is more, Ponderosa Pine has the durability which assures years of hard use.

Ponderosa Pine

WOODWORK



Here's the "How-to-do-It" book for building men, another in a series of American Builder self-help books.

That's what satisfied owners and prospects say to the building man who knows how to alter a floor plan. Success often depends on your ability to suggest alternate materials, or on knowing how to handle some detail that has an owner confused. *The man who knows how* is the man who gets most of the jobs.

You too can be *The man who knows how.* It's easy, because you can read and learn at home or in your spare time. *House Construction Details,* by Nelson L. Burbank can help you become *The man who knows how.* Here is the "how-to-do-it" book for building men, crammed with ideas, 1,500 illustrations, details and scale drawings, with short, clear explanations.

It's easy to find what you want in *House Construction Details,* because all drawings and details are grouped in construction sequence, beginning at the foundation and carrying through step-by-step to painting and finishing. Look over the table of contents below and see how well the book has been arranged.

There is a gold mine of ideas and practical information in *House Construction Details*—for the beginner who wants to learn or for the veteran who needs workable methods or saleable ideas *right now.*

Send the coupon today for your copy of *"House Construction Details."* With it you'll receive FREE the 1942 Book Guide—your guide to profitable reading.



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Floor Plans
Set of House Plans
Excavations
Foundation Forms
Foundations
Outside Walls
Inside Walls
Wall Sheathing
Ceiling Joists
Roof Construction
Bay Construction
Roofing
Cornices and Porches
Exterior Wall Construction
Interior Wall Coverings
Interior Trim
Stair Construction
Windows
Doors
Hardware
Closets
Shelves
Built-in Equipment
Finished Flooring
Chimneys and Fireplaces
Scaffolds
Garages
Heating
Air Conditioning
Elements of Electric Wiring
Insulation
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Gates
Garden Furniture
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Modern Homes
Index

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30 Church Street, New York, N.Y.

Enclosed find $3.00 for which send me a copy of the New Second Edition of *House Construction Details,* and a copy of the American Builder Book Guide FREE. If I do not find the book entirely satisfactory I will return it within 5 days of receipt and you will refund my $3.00.

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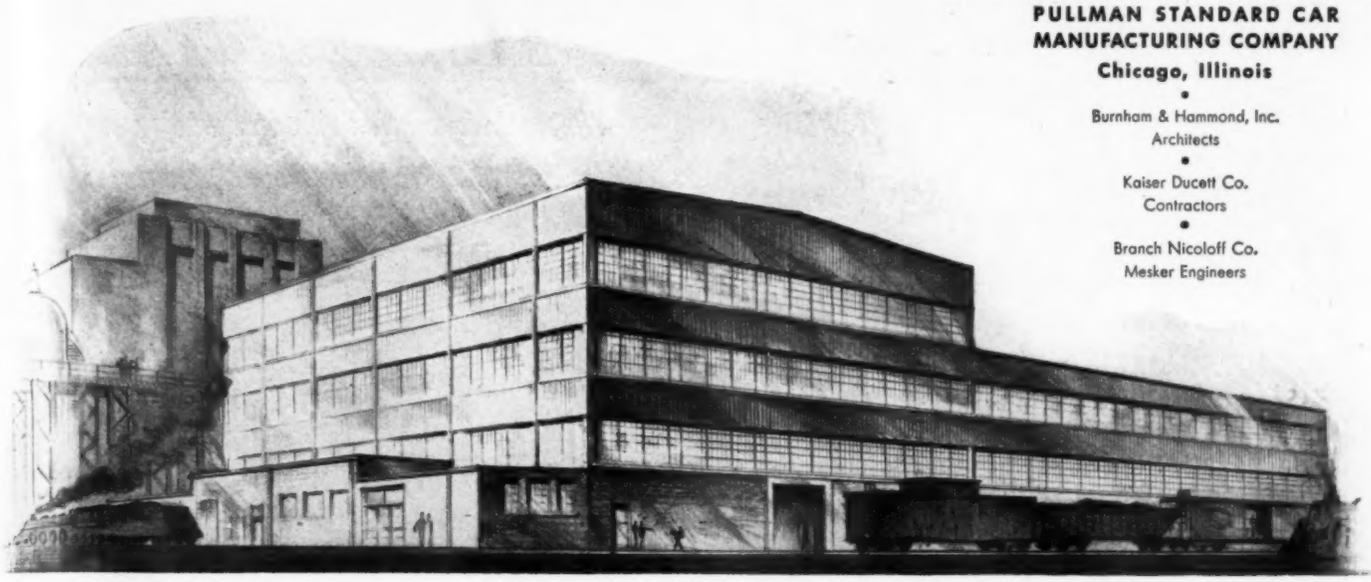
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Architects

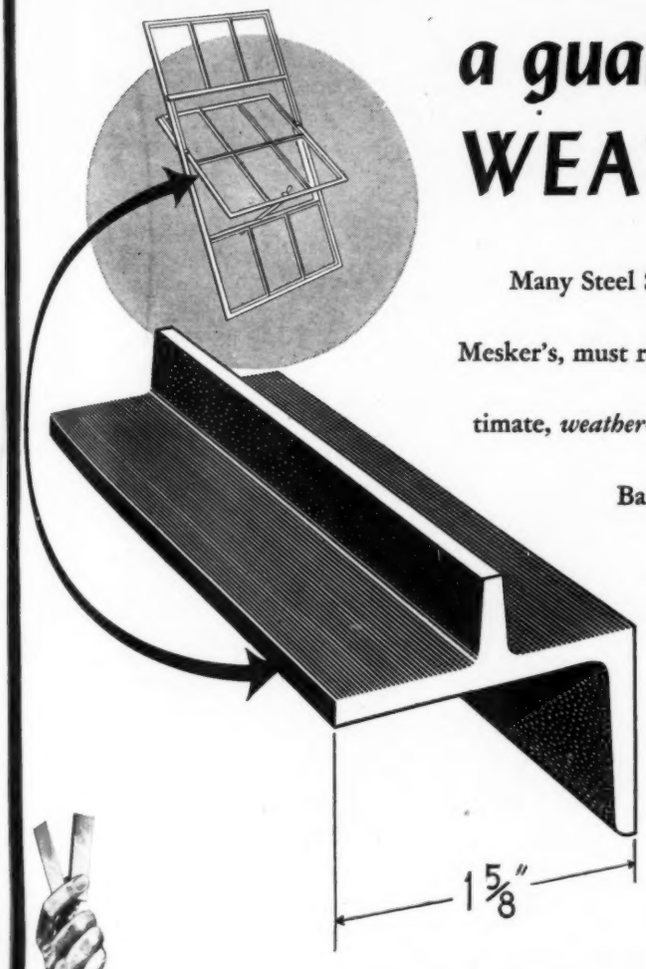
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a guarantee of WEATHER-TIGHTNESS

Many Steel Sash manufacturers, using Ventilator Bars far less sturdy than Mesker's, must rely upon hand-fitting to assure the Ventilator coming into intimate, *weather-tight* contact with the Frame. Mesker's heavy 1⅝" Ventilator Bar permits exclusive *mechanical fitting*... done on a special machine developed by us, with the human element eliminated.

A "little thing?" Perhaps..."a little thing to look for, a big thing to find"...but another reason why next time you should specify MESKER Weather-tight Industrial Sash.

VENTILATOR BARS A MINIMUM OF 1⅝" IN DEPTH

THE DOUBLE THICK WEATHERING BAR

...used on Mesker Industrial Pivoted Sash is ⅛" thick...twice that used by others in Industrial Steel Sash. This exclusive feature, so dramatically illustrated by the Visual Test Kit (free upon request), is indicative of the quality built into ALL Mesker products.

Mesker Brothers

STEEL SASH

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CASEMENT WINDOWS · MONUMENTAL WINDOWS · INDUSTRIAL WINDOWS
INDUSTRIAL DOORS · METAL SCREENS · DETENTION WINDOWS

BUILDING OUTLOOK

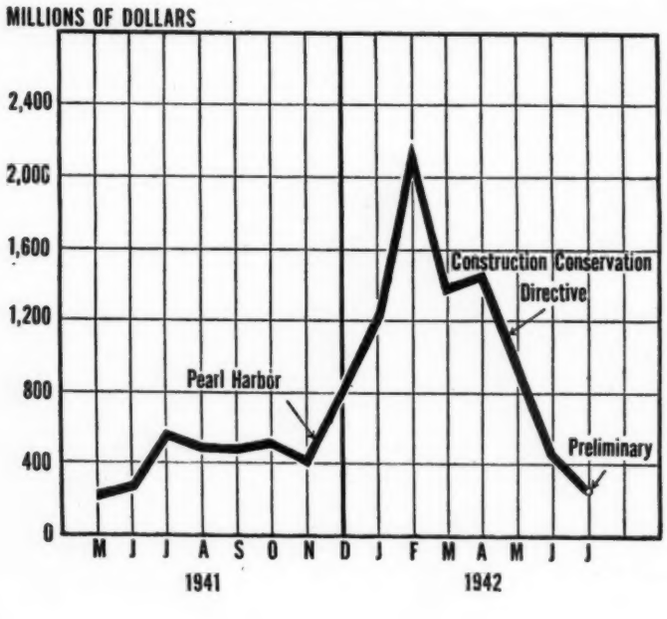
Timely Information About Building Markets and Probable Developments

AMERICAN-MADE PLANES, tanks and guns are shipped to Russia, England, China or Australia, according to where the current need is most urgent. Because of this flexibility, shipments can be made where they will accomplish the most. Similarly, the building industry is carrying on a huge war construction program, moving materials and men to various "fronts" according to the most urgent need. At the moment the big push is on military and naval construction. Huge quantities of materials are being poured into this work. Thousands of men are employed, but more men are needed for both domestic and foreign service. Right now there is a call for civilian building men and crews to construct military and naval bases, administrative buildings, hospitals, hangars, warehouses and depots *overseas.* Why not volunteer?

MANUFACTURERS whose output is practically monopolized by military and naval construction expect this type of work to reach its peak during the next few months. By next spring they expect to have materials somewhat available again for other uses. These reports indicate that important progress is being made in the most urgent type of war construction, and that heavy pressure from this source soon may be relieved.

INDUSTRIAL CONSTRUCTION provides another important phase of the wartime building program. An accompanying table shows monthly commitments for war industrial expansion financed with Federal funds. The downward course of the curve in recent months is in keeping with the War Production Board's announced policy of building fewer new plants and of spreading present war contracts to as many existing plants as possible through sub-contracts. As a result of this decentralization program many newly appointed arms sub-contractors are enlarging or modifying their factories in order to handle additional work. These jobs are being handled mostly by local contractors, using local supplies of non-critical materials, privately financed, and with little priority assistance other than authorization to do the work. Here the building industry has again demonstrated its ability to carry on an important phase of the war construction program without fuss or fanfare.

Monthly Commitments for War Industrial Facility Expansion Financed with Federal Funds, May 1941—July 1942



IN THE ABSENCE of new private residential building in all but defense areas the business of repairs and maintenance becomes increasingly important to men who take care of the "home front." The general policy of our war administrators is that we should take good care of what we have—homes as well as automobiles, so no limits (within reason) are placed on necessary repairs and replacements.

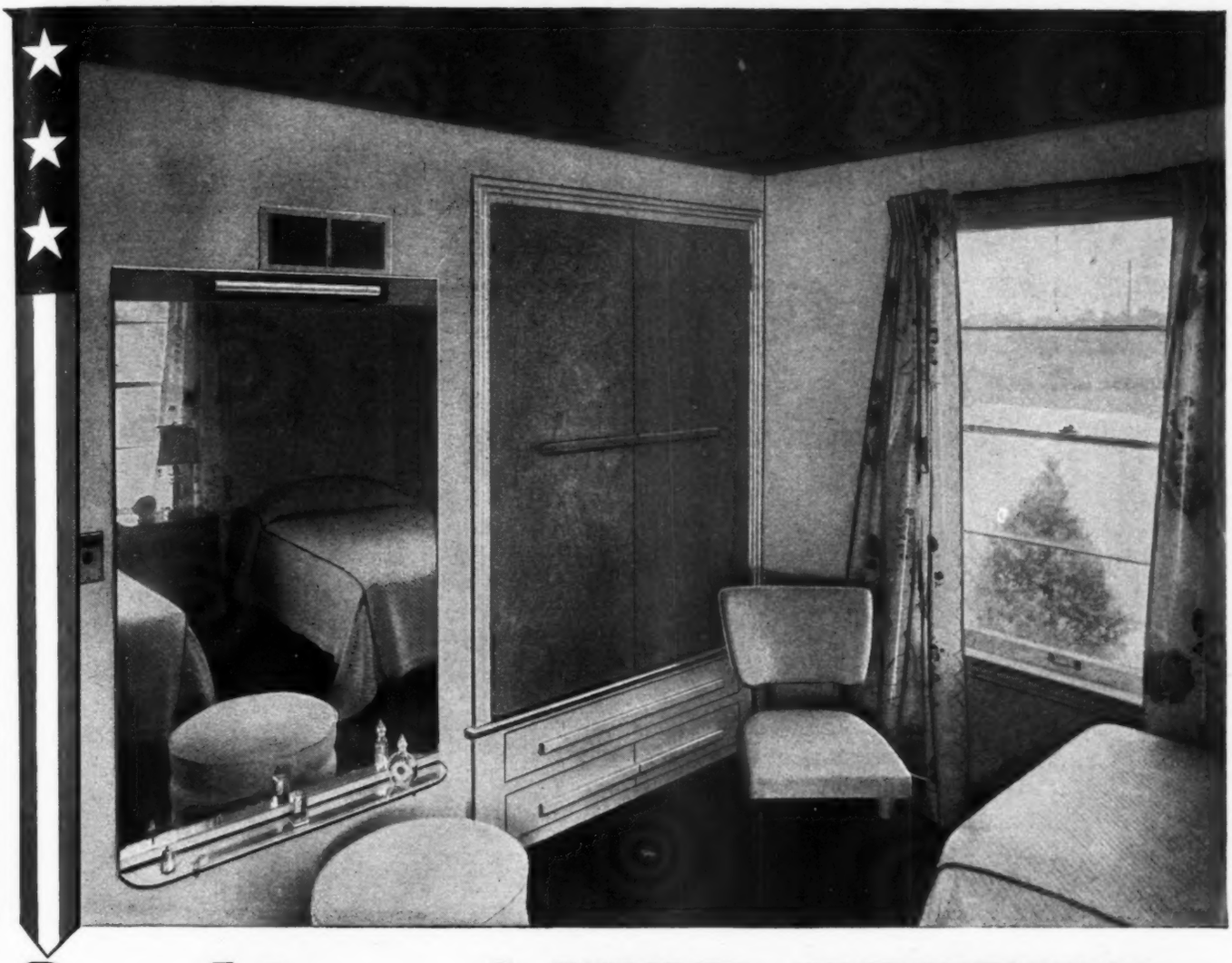
HOME REMODELING is affected by recent revision of Conservation Order L-41. Alterations of single-family dwellings have been reduced from a $500 maximum (within one year) to $200, while the limit on multi-family dwellings has been raised from $500 to $1,000. Special authorization is required on jobs exceeding these limits. Lowering of the ceiling on private residential work tends to curtail volume, but this should be more than offset by the War Production Board's policy of spreading war contracts and of absorbing war workers in existing homes; for many houses will require interior changes in order to accommodate an additional occupant. Because of the $200 limit many jobs will require authorization; and this should easily be obtained where conversions are to house war workers.

NON-RESIDENTIAL MAINTENANCE and repairs also take on new prominence, as shown by the launching of a new department on the subject elsewhere in this issue. The War Production Board has recognized the importance of this class of work by granting blanket authorizations to cover necessary construction work for a period of six months. This simplification eliminates the necessity for individual applications previously required.

THE NEXT MAJOR MOVE of the construction industry's man-power and materials probably will be to the war housing front. War housing has been held back by greater urgency of military and naval needs. Attempts to absorb war workers in existing homes have been only partially successful. There still is critical need for thousands of houses for arms workers. The need is recognized by the War Production Board, which has just liberalized the use of steel and other metals for use in utility services for war housing. The official announcement from the Office of War Information says:

"Installation of utility facilities using critical materials in defense-rated projects will be expedited under terms of an amendment to P-46. Order P-46 covers maintenance, repair and supplies for utilities. The amendment provides that suppliers of utility services to projects rated A-5 or better which require iron, steel or copper for their construction will be granted the highest rating assigned to other equipment for the project which also uses iron, steel or copper. All other required utility facilities will be assigned the lowest rating granted to materials for the project, so long as the rating is not below A-5. The effect of the amendment will be to assure completion of high-rated housing and other defense projects which might otherwise be held up because of inability to obtain materials for different types of utility extensions."

AS THIS IS WRITTEN the House Rules Committee has approved an additional $600,000,000 (the Lanham Bill) in Federal Funds for defense housing projects. It was predicted that the bill would be reported to the House for action within 24 hours. So the outlook is for increased action in war housing.



Speaking of WAR HOUSING—

IF YOU want some *good ideas* for war housing jobs, take a long look at the Menglebord installation above. . . . The room is small, yet smart and really comfortable. The Mengelbord walls are beautiful and "easy to keep", yet the construction *cost* was modest, and the construction *time* was a mere fraction of that required for plastering and papering. . . .

Mengelbord is genuine *hardwood* plywood, ¼" thick, and made in big 48" x 96" sheets *with the grain running the long way.* Being hardwood throughout, it is free from grain-raising, and can be painted, papered or finished in natural wood. It comes in two grades with faces of genuine Gum. Also DeLuxe Mahogany, Walnut, Birch or Oak. . . .

Mengelbord is resin-bonded in hot-plate presses. It is made exclusively by The Mengel Co., America's Largest Producer of Hardwood Products. If you have never tried this unique panelling material, let us send you all the facts *today.* The coupon is for your convenience.

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The Mengel Company, *Incorporated*
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Gentlemen: Please send me full information about Mengelbord ☐. Also about Mengel Flush Doors ☐.

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Help SAFEGUARD the homes of the Nation!

Uncle Sam depends on you to keep America's homes worth fighting for...safe from fire, weather and wear 'til the boys come home.

The building industry has been assigned an important wartime function...a challenge and an opportunity... a three-point sales campaign with a victory appeal:

1. ***Repairs and maintenance***—Needed repairs to leaky roofs, unsafe exterior walls and cracked plaster ceilings and walls can and should be made *now* to safeguard health and to protect values.
2. ***Remodeling for rent***—Needed rooms for war workers...clean, safe, healthy rooms... are urgently needed in many defense areas.
3. ***Fuel conservation***—The conservation of precious fuel is a war "must"...proper insulation is essential *now*.

In all three of these important fields, Flintkote building materials serve you and your customers with satisfaction and distinction.

Ask the friendly Flintkote man for advice and suggestions on Flintkote products for repair and remodeling jobs. Or write for full information to the nearest Flintkote office. The Flintkote Company, 30 Rockefeller Plaza, New York.

RE **PAIR**
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***with these time-tested* FLINTKOTE PRODUCTS**

Fire-resistant, colorful **ASPHALT SHINGLES & SIDINGS**
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New Orleans . . . Waco . . . Los Angeles . . . East Rutherford



All Atlas High-Early jobs are kin under the surface—they're fast and they save you money

These three short stories speak for themselves:

1. Machinery on floor before building completed. The Henderson Produce Company in Monroe City, Mo., had to build an addition to their plant in order to separate and dry eggs for shipment. *Speed was essential.* The contractor used Atlas High-Early cement for the floors and estimated one week's saving in time. He was able to place machinery on the floors before the building was finished. The addition was in operation in 60 days!

2. Running up the stair treads—fast! Even though the contract did not call for it, the contractor for the stair treads in a Cincinnati Housing Project used Atlas High-Early. He wanted to speed up the job and save lumber for forms. And he did. Use of Atlas High-Early cement instead of normal portland cement permitted removal of forms from treads in one-half the time. The job went faster and form costs were lower!

3. Storage room floor made ready overnight. A new plant at ———— needed a floor—on the double quick! Engineers and contractor decided on Atlas High-Early cement. The last concrete was placed about 4:30 P. M. At 8:30 the next morning, steel was being stored on it—as much as 1,600 pounds per square foot. This use of Atlas High-Early saved at least four or five days on an important war job.

★ ★ ★

Speed with economy is the reason why Atlas High-Early cement is specified and used so much today—speed in completing defense housing, cantonments, roads, airports, war production plants.

On almost any kind of concreting job where "Rush" is a must, rely on Atlas High-Early. In application, it's like normal portland cement and just as easy to handle. Universal Atlas Cement Company (United States Steel Corporation Subsidiary), Chrysler Building, New York City.

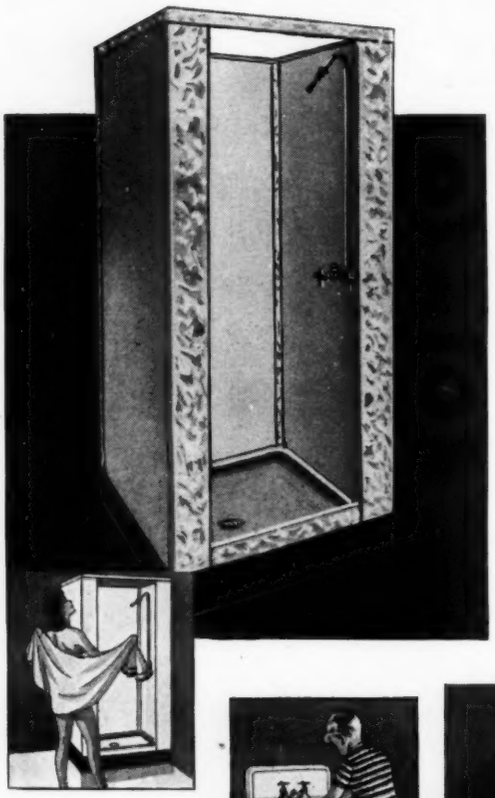
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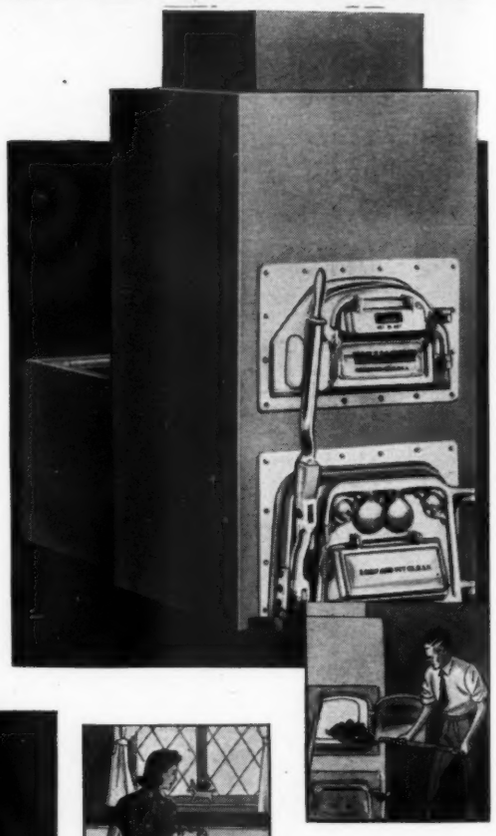
ATLAS HIGH-EARLY CEMENT

A UNIVERSAL ATLAS PRODUCT

Quality Built
FOR AMERICAN WORKERS



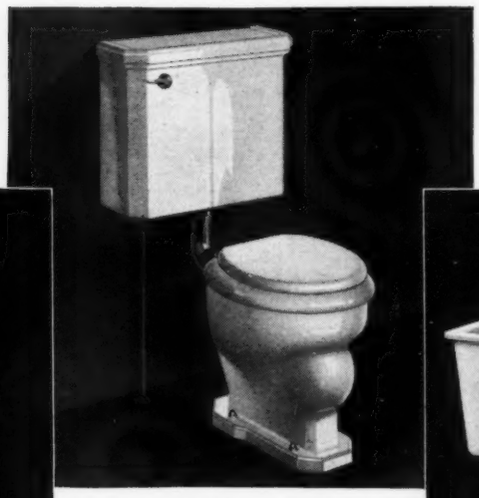
This non-metallic shower stall conforms with item P-19-A War Department specification PE-623 and uses a minimum of critical materials. The walls are of fibreboard, baked-on enamel finish, and metal parts are galvanized steel. The receptor is precast concrete with integral drain. Size 32 by 32 by 75 inches.



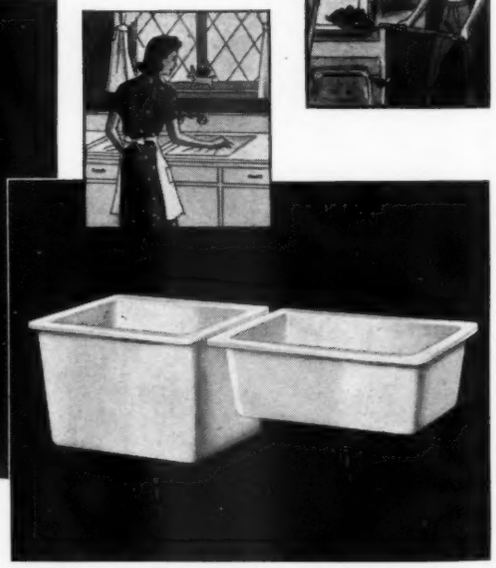
The Crane No. D-18 Defense Housing unit is a forced warm air furnace designed to conserve heavy plate steel so vital to Defense projects. Large doors make firing and ash removal easy. Has powerful blower that is exceptionally silent running.



• CE-764 new "Victory Cantonment" lavatory. Made of easily cleaned vitreous china with cast iron trim, heavily galvanized. Mounts directly on the wall with screws—no hangers needed. Uses a minimum of critical materials.



• C-11-145 Neuton closet of vitreous china. Efficient in operation. Vitreous tank has shelf top. Trimming is of cast iron heavily galvanized. Uses a minimum of critical materials.



• CE21-235 Duraclay flat rim laundry tub for installing in counter. Shown with CE19-566 kitchen sink. Has galvanized iron waste plug with stopper.

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Building Industry Deserves Merit Award

SOME PEOPLE outside the building industry seem inclined to shake their heads sadly and say, "Building must be hit awfully hard by the war." Such people don't know that building volume now is close to $1 billion a month. In less than two years the industry has converted from peace to full-scale war production. Not only has it converted to war, but with reduced man-power it is turning out a bigger volume of war construction than it did on a peace-time basis last year. The building industry's conversion to war deserves a merit award, similar to that given to manufacturers for efficient production.

The chart below, prepared from figures collected by the U. S. Department of Commerce, shows total construction by types for the first and second half-years of 1941-2, with totals for each year. These figures show that the building industry, because of its adaptability and resourcefulness, has poured men and materials into the types of construction where the need is most urgent. All construction is war construction today. Nothing can be built unless it advances the war program or is necessary to public health and safety. This means that the building industry has converted 100 per cent to war.

* * *

MILITARY AND NAVAL construction is the largest single item in the 1942 program. It accounted for less than 19 per cent of the 1941 total, but with a volume of $4.51 billions it constitutes 38.3 per cent of the 1942 total. In 1936 military and naval construction totalled $29.5 million. The 1942 total is 152 times larger. Some idea as to size of our present program can be had by comparing it with figures on farm construction, which this year will total $27 million, or slightly less than the 1936 military and naval figure. The farm total is indicated by a narrow line, yet nearly half of the lumber and building materials normally are sold in towns of less than 10,000 population, which includes the farm market.

The next largest item is non-residential construction, which increased from $2.98 billions in 1941 to $3.20 billions this year. These huge sums include private and public industrial construction, and embrace the building of many spectacularly large war plants that are making possible the amazing production records of which American industry and the American people justly are so proud.

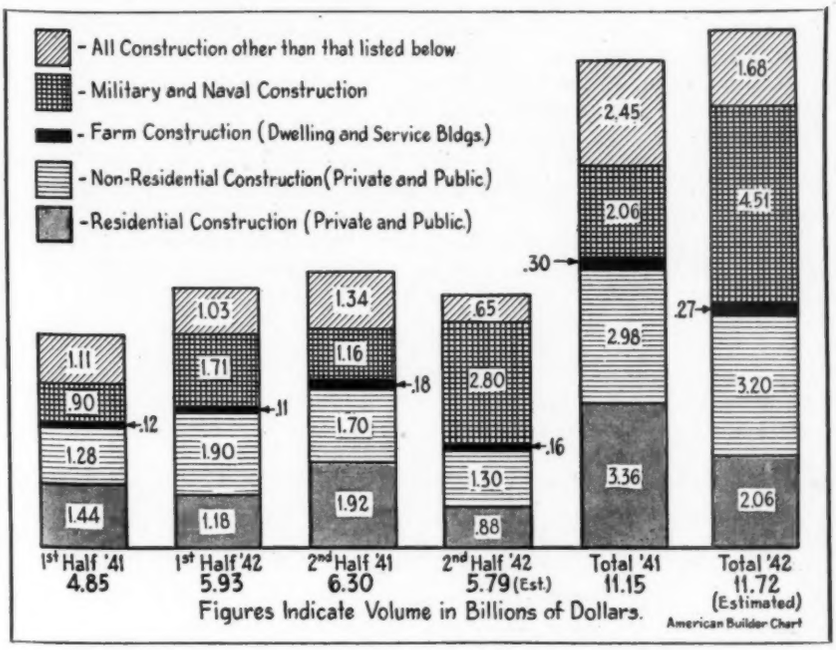
* * *

THE THIRD LARGEST item in the 1942 total is private and public residential building, which accounted for 30.2 per cent of the 1941 total and declined to 17.6 per cent this year. This decline was caused by greater urgency of other types of construction, rather than by any lack of need for additional war housing. It is believed that war housing will receive additional attention as soon as the most urgent military and naval work is completed.

The output of many large manufacturers of building materials now is monopolized by military and naval construction. Similarly, all the experienced building men of many communities are hard at work on huge military and naval construction projects. Both materials and man-power will be available for whatever other types of work will be most urgently needed.

* * *

THE BUILDING INDUSTRY is patriotic. It realizes that everyone should cooperate 100 per cent in the war program, so as to get through with this war as quickly as possible. Special interests have said to our war administrators, "Relax your wartime regulations in our case and let us get by." The building industry has asked no such favors. It has accepted wartime restrictions without complaint. It puts the war program first during the emergency; but it wants to get back as soon as possible to providing the essential services it normally renders the nation. The industry is doing a big wartime construction job efficiently and without fuss or fanfare. That is why we say the building industry now deserves a merit award for war production.





O. W. I. Photo

A CHALLENGE to All of Us

Builders must use "all their skill and ingenuity" to get needed jobs done, says William V. Kahler. Sees big job in small plant conversion. Must keep nation's industrial plants at top efficiency

By William V. Kahler

Chief, Bureau of Construction
War Production Board

WINNING the war is now the number one job of every man in America's building industry. This, expressed in its simplest terms, means that the industry must make the most efficient use of all of the skill and ingenuity that it has at its command to get essential war construction done quickly. It means speedy conversion of small plants to turn out products vitally needed as the war progresses on broader fronts. It also means keeping the nation's industrial plants going at top efficiency by applying foresight to the ever pressing problem of maintenance and repair.

The industry must keep in mind that every day of delay on a construction job means fewer planes—fewer bombs—fewer guns—fewer rounds of ammunition, and consequently, less effective support for our forces in the field.

It is our job in the Bureau of Construction to help in this task to get materials on the job when, and in the amounts needed. It is our job too—to administer, in the best way we know, Conservation Order L-41. We must see to it that no construction is approved that is not essential to the war program or to the maintenance of health and safety.

It is appreciated that our administration of this Order may seem severe, but construction deferments now will create a building reserve that should spell out a vigorous construction activity when peace comes.

We all must keep ourselves constantly geared to a diminishing supply of construction materials and spread practical usage of these materials in a way that they will do the most good. We all must conserve our materials supply to the fullest extent by controlling the amounts and kinds that go into the construction we authorize. We take the point of view that the war can be won or lost on the drafting board.

Builders everywhere can assist in this important objective by employing designs of the simplest sort and by being watchful always of scrap and waste.

"The BULLDOZER Clears the Way for the BOMBER"

A Vigorous Message to the Men of the Construction Industry



Photo by Harris & Ewing

By Lt. General Brehon Somervell

Commanding General U. S. Services of Supply

THE construction program of the United States Army is rapidly making this country the most powerfully implemented nation for making war the world has ever seen. By the end of 1942 all forms of war construction will attain a rate of approximately $13½ billion per year. Nothing like it has ever occurred before. The facilities the construction industry is providing will turn out material in such quantities as neither Hitler nor the Jap war lords have ever dreamed.

The rapid performance of this construction program has reflected great credit upon not only the United States Army but the engineers, contractors and workmen who have made it possible. Only when the program is viewed as a whole can its tremendous size be appreciated.

Within less than two years building contractors for the Army have provided excellent living quarters for a population more than half the size of that of New York City.

In the construction of hundreds of thousands of buildings, mostly of wood, the Army has become the greatest buyer of lumber in the nation. During one month alone this year the Corps of Engineers purchased more than one billion board feet of lumber. Approximately 10 billion board feet will have been purchased by the end of 1942.

The bulldozer has cleared the way for the bomber while the tractor has set the stage for the tank.

Housing for war workers too is important. Indeed, I consider a good workers housing program an essential if the Services of Supply is going to keep on fulfilling its function of allocating more and more tools of war to our fighting men.

When we move soldiers, shelter is considered part of their equipment—important to their efficiency. That applies equally well to workers.

The size of the nation's wartime construction program is a challenge to every man in the building industry. We are proud of the job that has been done and expect it will be continued.



"We Are Asking Private Builders to Furnish 270,000 Dwellings"-Blandford



JOHN B. BLANDFORD, JR., Administrator, who says National Housing Agency will continue to help builders get scarce materials.

Housing chief reaffirms program for private builders in special statement to American Builder issued September 18

EDITOR'S NOTE—In July, American Builder published a bulletin outlining in detail Mr. Blandford's original war housing program. Since considerable doubt has been expressed as to whether this program could be fulfilled, we asked for a more recent confirmation, which is published below.

It is apparent that the housing need is critical, and it is our opinion that if material shortages prevent completion of this program within the stated time limit it can only mean that the objective—1,320,000—will be spread over a period beyond June 30, 1943.

By John B. Blandford, Jr.

Administrator, National Housing Agency

THE urgent need for more housing for in-migrant war workers, complicated by the scarcity of critical materials, makes it imperative that we concentrate every available resource, both private and public, to meet this essential to all-out production.

Private homes builders have already made a valuable contribution to the national war housing program, and the National Housing Agency is looking to them for additional assistance this year.

The War Manpower Commission estimates that a minimum of 1,600,000 indispensable workers must be imported to war production areas during the twelve months ending June 30, 1943. Housing these men and women will require 1,320,000 accommodations, of which we plan to find 650,000 in existing structures.

Of the 670,000 accommodations that must be provided by new construction, **we are asking private enterprise to furnish 270,000 family dwelling units.** We are also planning 205,000 family dwellings to be built with public funds, many of temporary construction. The remaining new accommodations—195,000—will be dormitories for single workers and dormitory apartments for two-person families.

Because of the materials shortage. permanent family dwellings will only be programmed where there is a definite need for this additional housing after the war. **It is a basic policy of the National Housing Agency wherever such permanent housing can be planned to give private industry every opportunity to supply as much of the need as possible.** We have helped the private builder every way we could—in simplifying priority processing, getting materials and developing substitutes for scarce items—and we will continue to offer such help.

The War Manpower Commission determines manpower requirements. The War Production Board fixes production schedules and allocates the needed building materials. Congress sets the war housing policy—public and private—and makes funds for public housing available. Within these limitations and rapidly fluctuating factors the National Housing Agency must move to provide as much essential housing as possible with the funds and materials at hand, changing its programs to meet each new set of circumstances.

Schedule for year ending June 30, 1943

Private Family Dwelling Units	270,000
Public Family Dwelling Units (many temporary)	205,000
Public Dormitories and Dormitory Apartments	195,000
Use of Existing Structures	650,000
TOTAL ACCOMMODATIONS	1,320,000

Further Building Restrictions Ordered

War Production Board Amends L-41, Cutting New Non-priority Residential and Commercial Construction to $200; Agricultural Improvements Remain at $1,000; and Industrial is Placed at $5,000.

DRASTIC CUTS were made by the War Production Board in the amount of civilian construction allowed without specific authorization under the provisions of revised Conservation Order L-41, effective September 7. The L-41 order dated April 9 and fully explained in the May issue of this publication had already placed all civilian construction under rigid control.

Types of construction have been reclassified, making distinctions within residential and non-residential categories and reducing in most instances the amount of construction for which no authorization is necessary.

At the same time, prospective builders are cautioned against making commitments for materials until permission to build actually has been granted. The fact that a builder has all necessary materials on hand and needs no priorities assistance will not, in itself, govern whether he should be permitted to use them in construction.

New classes of construction established by revision of L-41, with former and present cost limits, follow:

Type of Construction	Former Limit	Present Limit
Residential	$500	$200
Multiple residential	$500	$1,000
Agricultural	$1,000	$1,000
Industrial	$5,000	$5,000
Certain types of commercial	$5,000	$200
Other types of commercial, including highway, sub-surface and utilities construction	$5,000	$1,000

Included among the types of commercial construction reduced from $5,000 to $200 are buildings designed for use as clubs, lodges, associations, fraternity or sorority houses, auditoriums or assembly halls. Also included are buildings designed for occupancy by not more than five establishments selling or dispensing goods, merchandise, food or drink, or providing services. In the latter group are small stores, restaurants, soda fountains, bars, and tailor, barber and cobbler shops. Large quantities of materials have been going into their construction under the provisions of the original order allowing up to $5,000 to be spent during any continuous 12-month period.

Multiple residential construction includes buildings designed to provide living space for more than five families or divided into more than five suites.

Industrial construction includes buildings designed for use in the manufacture, processing or assembling of goods or materials.

In every instance where estimated costs are under the established limits, the owner, before he may begin construction, must be able to acquire enough material to complete the project without priorities assistance. Furthermore, the project must not require the use of any material, on the site or off the site, to supply electricity, gas, water, steam, telephone or sewage disposal service.

There is no change in the original provision that residential construction damaged by fire, etc., after December 31, 1941, may be restored without authorization. Agricultural construction damaged in that manner after September 7 may also be restored in cases where the Department of Agriculture determines that immediate reconstruction is essential to the agricultural program. It is provided, however, that a regular application form PD-200 must be filed within two weeks of such determination.

Industrial and other restricted construction similarly damaged may be restored where immediate reconstruction is necessary for the prosecution of the war or protection of public health or safety. In such an instance a telegraphic report must be made to the War Production Board within five days, setting forth certain data, and

(Continued to page 92)

Preference rating order	Type of construction	Application forms	Where filed
P-14-a, P-14-b	Shipyards and shipways	No form	Maritime Commission, Washington, D. C.
P-19, P-19-a	Buildings, structures and projects important to the war effort and essential civilian needs, other than housing.	No further application accepted under P-19 and P-19-a. Apply for P-19-h or P-19-i.	
P-19-d, P-19-g	Publicly financed housing	Application is made only by the federal agency principally interested in the construction.	
P-19-e	Public roads	Application is made by or through the Public Roads Administration of PWA.	
P-19-h, P-19-i	Buildings, structures and projects important to the war effort and essential to civilian needs other than war housing.	Forms PD-200 and PD-200A	With the field office of FHA having jurisdiction over the location of the site, or in such other place as may be prescribed.
P-41	Construction of air transport facilities.	See order	
P-55, P-55 amended	Privately financed war housing	Form PD-105	With the field office of FHA having jurisdiction over location of the site.
P-98	Construction related to petroleum enterprises as defined and limited therein.	See orders in M-68 series	
P-110	Remodeling of housing in defense areas.	Form PD-406	With field office of FHA having jurisdiction over the location of the site.
Certificates PD-3, PD-3A	Principally buildings, structures and projects owned or to be owned by the Army, Navy or certain other governmental agencies.	Form PD-3A	With the contracting or procurement official having jurisdiction over the contract.

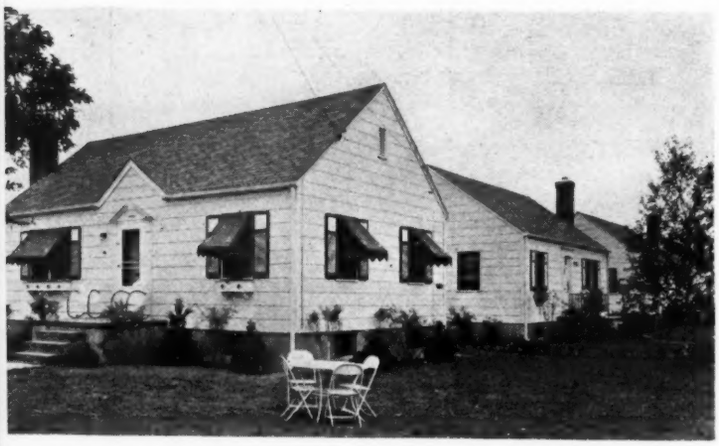
The above Preference Rating Orders and Certificates are listed pursuant to paragraph (b) (9) (i) of the Order. A general description of the type of construction covered by each, the appropriate application form and where such form should be filed, are given solely for purposes of identification.



TITLE VI HOUSES in wooded section of Bellmore, N.Y., nearing completion by David Van Dam. They are sold on lease-option plan with $100 deposit and $45 monthly payment for 30 months. Houses are well designed, well equipped, close to airplane plant.



EIGHT-FAMILY APARTMENT under construction by Callan Brothers, near Great Neck, N. Y., one and a half miles from airplane plant. These builders are noted for their quality construction.



DROESCH HOMES near Farmingdale, Long Island, built under Title VI, rent for $38 per month on five-year lease, with option to purchase. When renter buys he takes title subject to the reduced mortgage. Droesch has built hundreds of homes in the past few years and by last report has space for 1,000 more.

Look Ahead 6 Months Builders Urge

Say housing shortage will be much more acute then. Private builders who have amply demonstrated ability to produce good small war houses should be permitted to keep organizations together

DESPITE the difficulties under which they have had to work, private builders of war housing have made a remarkable record this year. FHA Commissioner Ferguson has reported that more than 105,000 new houses were started in the first eight months by private builders under the FHA war housing program. In addition to houses started under FHA supervision there have been many additional thousands in rural as well as urban areas, which more than double this figure. The Bureau of Labor Statistics, for example, shows that 194,000 privately built houses were started in the first six months of this year in "non-farm" areas.

Not only have these houses been built quickly, efficiently and well, but they are for the most part worthwhile additions to their communities. The nation's builders have demonstrated their ability to organize jobs and get them done despite the handicaps of material shortages.

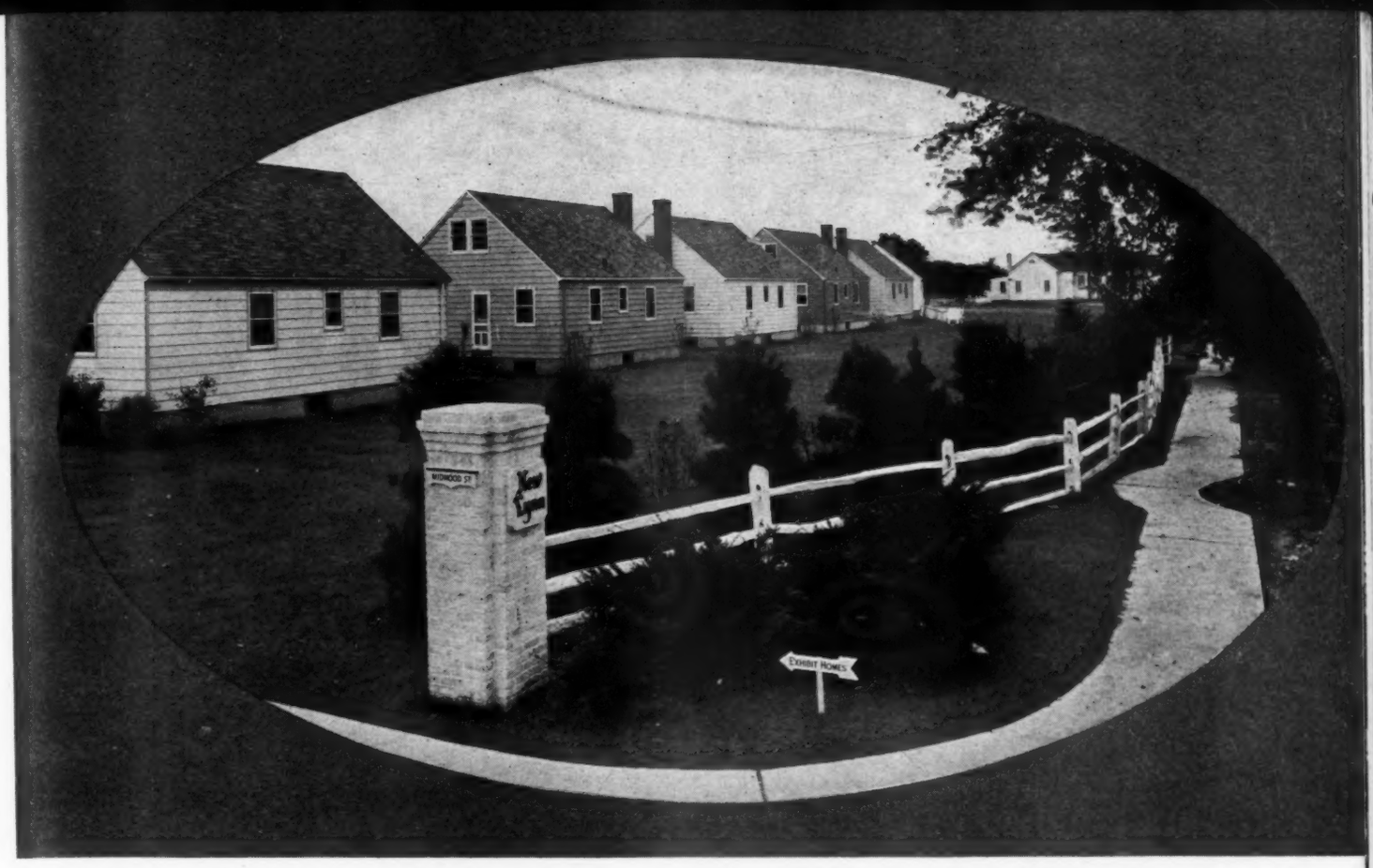
Yet now they are faced with so many difficulties and obstacles and shortages that there is some doubt as to whether they will be able to continue.

The important question builders are asking is, what will the situation be six months from now?

At that time the housing shortage everywhere will be more acute. A great demand will undoubtedly be heard for housing when this shortage is so acute that it seriously impairs war production. At that time, in all probability, the government will have to once more turn to the thousands of experienced residential builders in



LONG ISLAND builders confer. Left to right: G. A. Mezger, president L. I. Home Builders Institute; Walter J. Harter, vice president; Patrick J. Callan, builder; Joseph B. Mason, American Builder; Otto J. Hartwig; Frank Droesch, one of most active Title VI builders on Long Island.



"BACK YARD" of a Title VI job—one of which war workers are justly proud. Williams and Harter, builders. Shown below are front view of same houses, which are arranged on curving street with large grassy plots.

PRIVATE BUILDERS erected more than 105,000 homes under FHA war housing program in first eight months of 1942. They have demonstrated that they can build good-looking, well-built small homes efficiently and quickly with minimum use of materials. Their building organizations will soon disintegrate unless priorities and materials are available to continue work where housing is needed.



private industry for it will be a job that barracks or public housing cannot possibly handle.

The thing that private builders fear is that by that time their organizations will have been broken up and that they will not be able to do the job.

A way should be found, they say, to keep enough residential building going to hold at least skeleton organizations together.

Naturally, the housing situation is vastly different in various parts of the country. In many areas the need is so acute that there is no question but that home building by every possible means should be rushed at once. This is especially true in such a city as Detroit.

But there are other areas where, although people are not yet "sleeping in the park" the situation will be acute in another six months. One of these is the outer part of Long Island—Nassau County—where huge new airplane plants and other industries are rapidly creating an influx of workers. As it happens, Nassau County builders have been doing an especially noteworthy job in building Title VI war housing. As the designs on this page clearly show, they have set a high standard of community planning and good construction.

In order to assemble the necessary facts, the Long Island Home Builders Institute had a survey made by Otto J. Hartwig, public relations director of the organization. Personnel increases of war plants in the country will total from 40,000 to 50,000 in the next six months, his survey showed.

While some of the workers will be drawn from nearby communities others will have to travel as long as from three to five hours to reach their job. Shortages in accommodations under $50 per month were shown.

The particular problem of many of the Long Island builders is that, acting on the urging of government

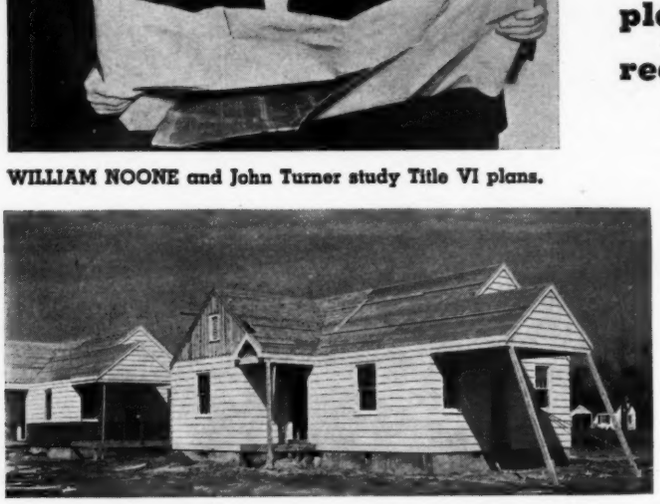
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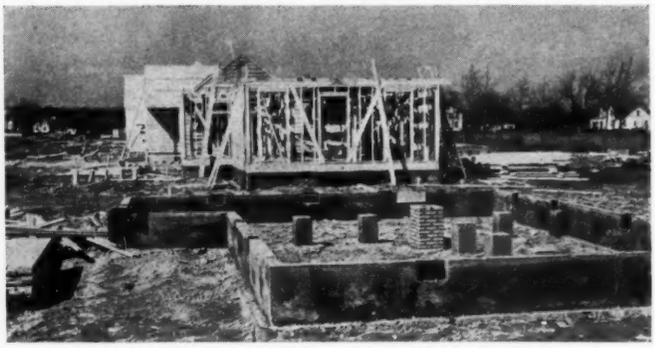
WILLIAM NOONE and John Turner study Title VI plans.

5 Ways to put PUNCH In War Home Design

How Turner & Noone, English builders, planned and constructed one of most recent Norfolk, Va., Victory home jobs



PROGRESS VIEW of Turner & Noone Title VI model.



PIERS and 6" concrete foundation walls in place.

FROM London, England, to Long Island, to Norfolk, Va., is the course that has been followed by Builders William M. Noone and John L. Turner. They represent the Taylor-Woodrow Estates, Ltd., of London, one of the world's largest home building firms, which prior to the war had been building homes at the rate of more than a thousand a year in England.

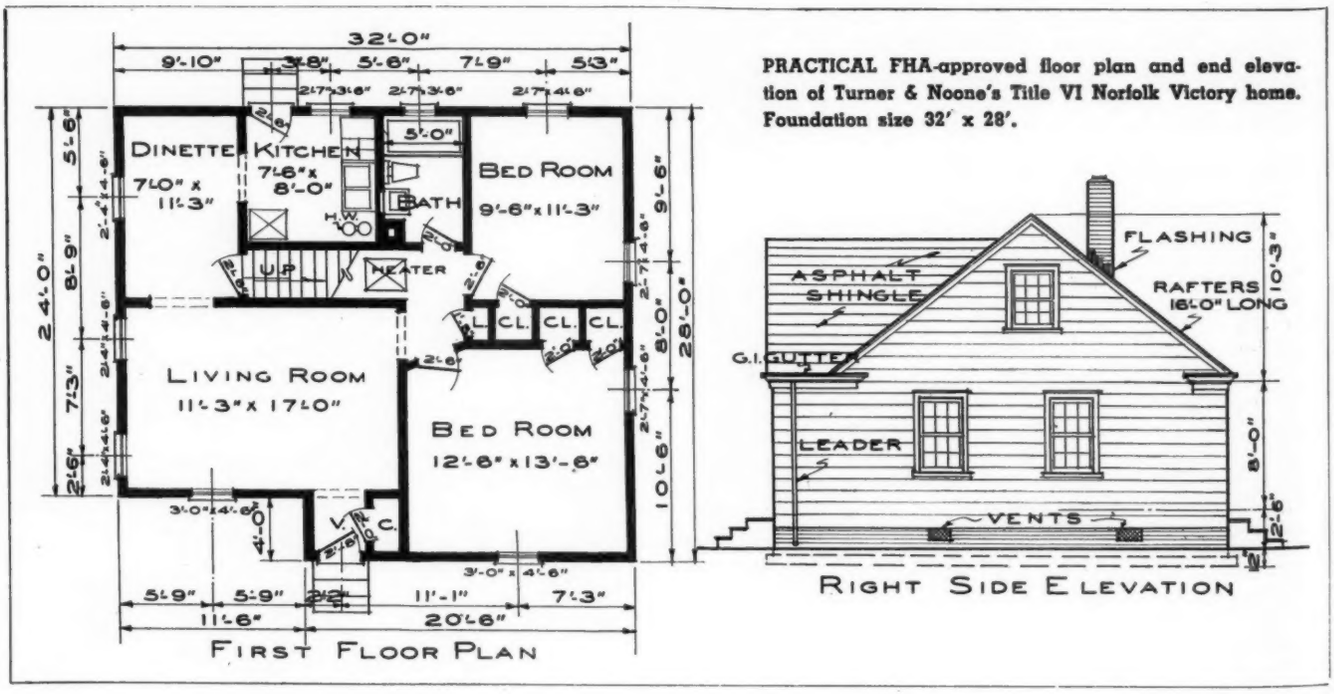
Turner & Noone quickly learned American building methods on Long Island and successfully developed two projects, the last of which was the 120-acre Green Park Estates described in the April 1941 *American Builder*.

Now John Turner and Bill Noone, like a number of other Long Island builders, have moved to Norfolk.

32' x 28' Plan Popular

The 102-acre tract is located on Bay View Road within convenient reach of the Norfolk Naval Base. It is a flat, level piece with convenient bus service and with utilities, except sewers, already brought to the edge of the tract. A plot plan with winding streets in the best FHA land planning tradition has been prepared, and the lots have a minimum size of 7,000 sq. ft.

The basic floor plan adopted for this job and detailed herewith is 32 ft. long by 28 ft. wide, with five rooms on the first floor and stairs leading to an unfinished sec-



PRACTICAL FHA-approved floor plan and end elevation of Turner & Noone's Title VI Norfolk Victory home. Foundation size 32' x 28'.

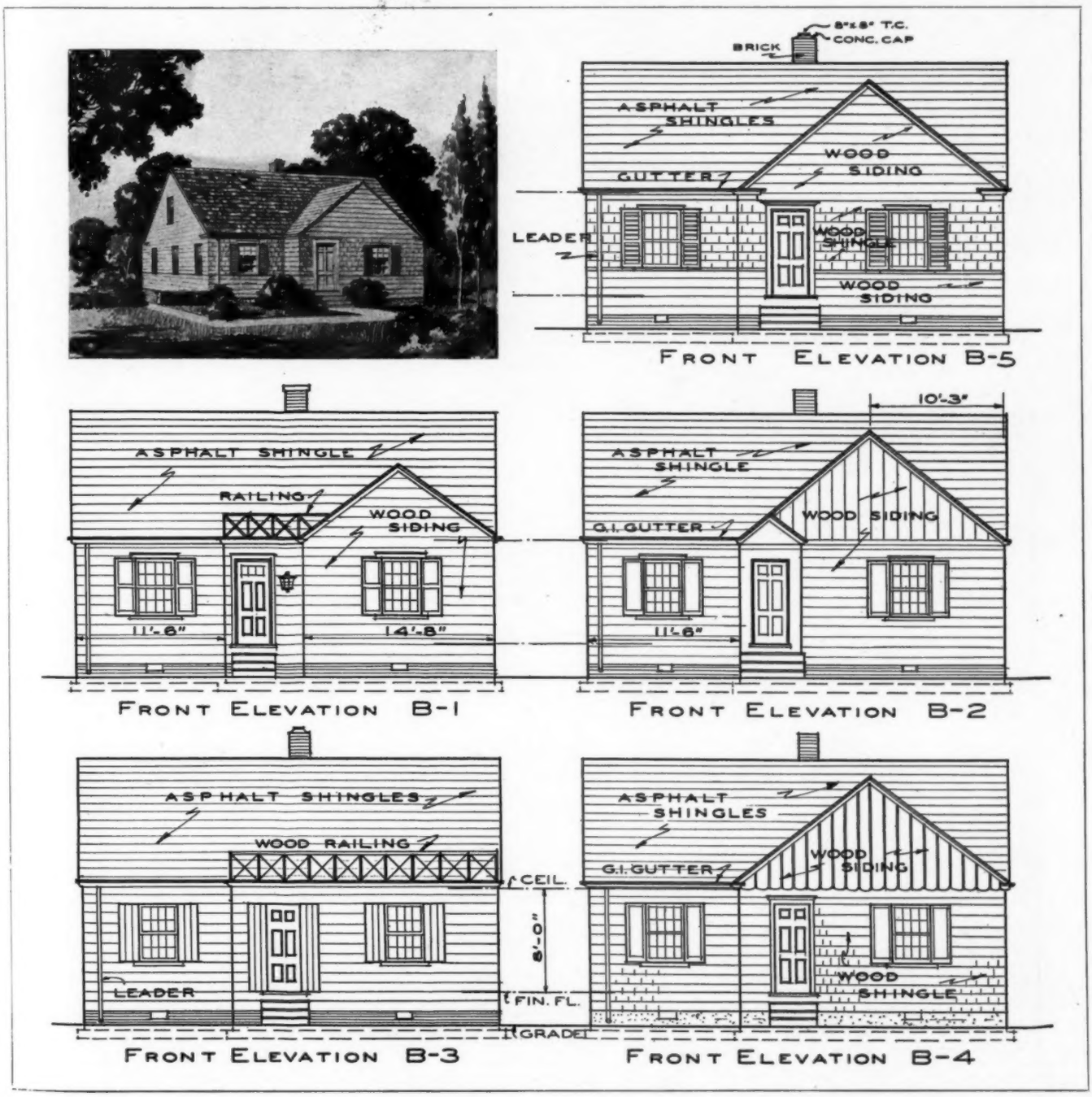
ond floor where there is space for additional rooms. The plans were prepared by Architect Alan McCullough.

Power saws are used to precut all lumber and paint spray equipment speeds up their painting operations. Neither of these was possible on Long Island due to labor union restrictions. Since the houses do not have basements there is little excavating to do. The foundations are very simple, consisting of a 16″ x 8″ footing and a 6″ concrete foundation wall that rises less than 2′ high. The houses are heated with a small floor furnace hung from the floor and located in the center hall. Five cleverly designed exteriors for the same basic plan have given the houses much appeal.

Turner & Noone have experienced many difficulties due to shortages of utilities—particularly waterpipe. As a result their original program has been somewhat curtailed.



FIRST of Turner & Noone's Title VI houses getting under way.



FIVE WAYS TO DO IT—Here are 5 clever treatments that Turner & Noone are using to give variety and interest to the basic floor plan shown at left. Houses are being built under FHA Title VI to rent or sell. Alan McCullough, Norfolk, architect.

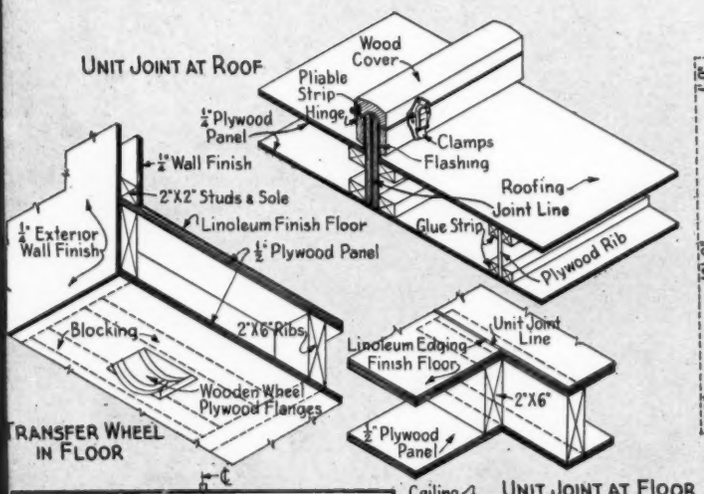


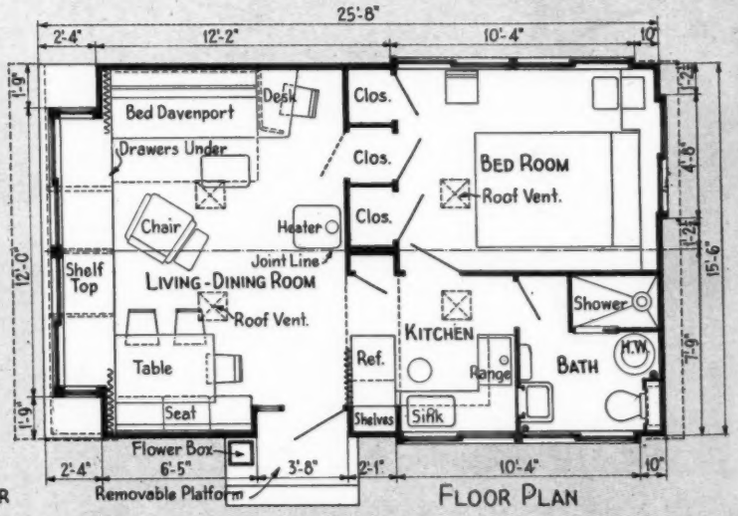
At Home in a TRAILER

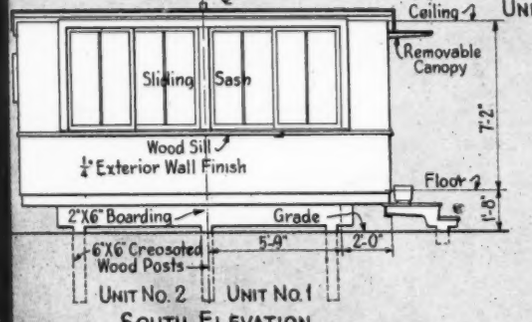
BELIEVE it or not, but the attractive interior at the left is that of a trailer house as seen through the front window. It is complete with numerous built-ins, including stove, refrigerator and lights.

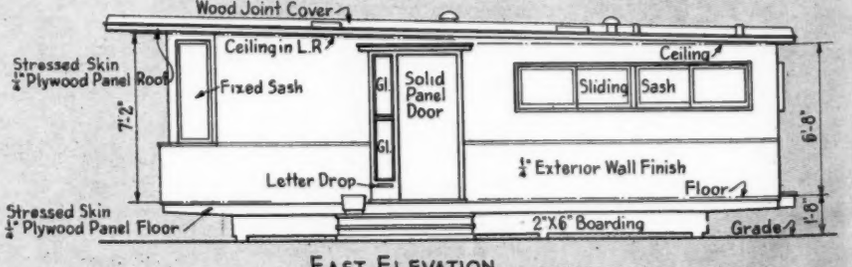
Hauled on wheels from Michigan, each two sections as set up on a North Carolina site complete a home for another Alcoa worker

THE details below indicate construction of the newest type trailer home built for use of war workers of the Aluminum Co. of America, North Carolina plant. The two sections are assembled on the site, as shown in views on opposite page.









UNDER the emergencies of war the building industry has been subjected to many novelties, of which one of the most interesting is a trailer home. The TVA has for some time been working on such a project, one of the initial experiments having been reported in the May, 1941, issue of *American Builder*. Now with numerous refinements the latest trailer home is rolling off the production line across the country and onto its foundations. Such a unit, as set up in North Carolina, is illustrated here.

Comprised of two sections 26 by 8 feet, and a prebuilt wood foundation, the parts assemble to provide a living and dining room, bedroom, kitchen and bath. Maximum use is made of available space by building in all furniture except chairs, tables and a lamp or two. Walls, ceilings and floors are plywood; floor coverings are linoleum.

Light trucks are used to transport the sections, one of which contains half of the living-dining room, the bedroom and most of the closet space; the other houses the rest of the living-dining room, bathroom and kitchen. Built-in wheels fit the foundation track so that the two parts are easily rolled into place off the trailer wheels. This job of assembly can be completed in half a day.

On the opposite page, the interior view gives an idea of the compactness and livability of these units. Nothing has been left out, yet the apparent spaciousness is amazing, considering the over-all size. The question builders might well ask themselves is, what place would such units have in the post-war era.

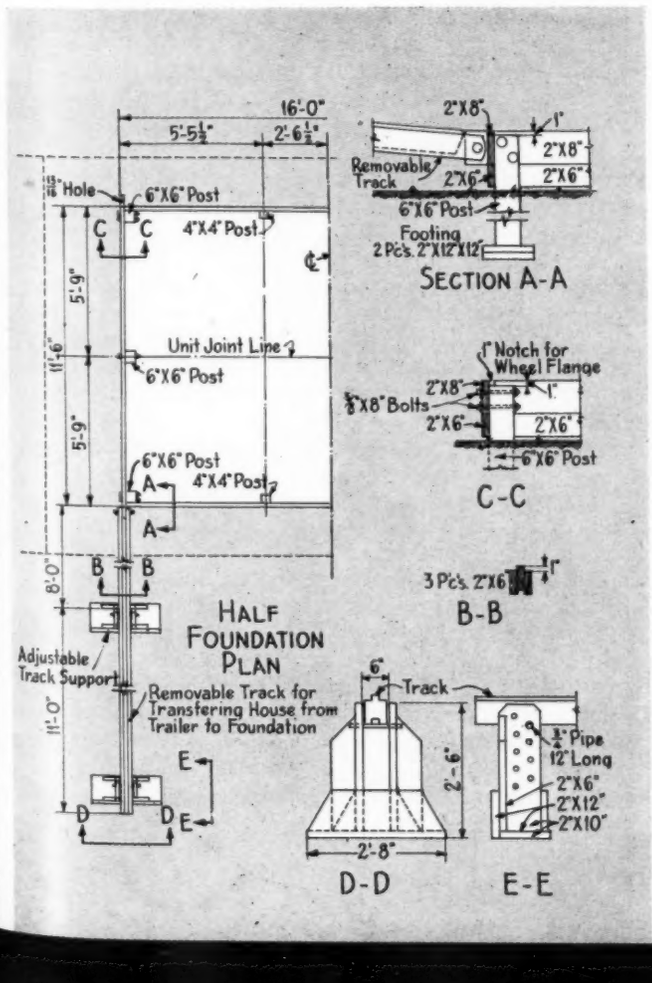
RIGHT, top to bottom: One of the two sections of TVA trailer house en route from Michigan factory to North Carolina site: built-in wheels allow sections to be rolled in place on prefabricated foundation (see detail). When the two sections are joined, the result is the snug but complete little home shown.













WARTIME Maintenance & Repair of Buildings

A department devoted to keeping America's investment in structures in efficient condition "for the duration"

Commercial and Industrial Properties, Public Buildings, Institutions, Housing Groups and Houses

WILLIAM V. KAHLER, chief, Bureau of Construction, War Production Board, in an interview with *American Builder,* set the job of construction industry men in these words, "You men of the building industry can help win the war by devoting your time and energies to essential maintenance as well as vital war jobs."

American Builder, alert to the ever-changing needs of the building industry, provides its readers with an additional and timely service in this new department, "Maintenance and Repairs." The task of keeping America's huge investment in existing buildings at peak efficiency is gigantic. The information presented in this department deals with the structural side of building maintenance and with descriptions of materials and equipment, methods of application, installation and ways of prolonging their usefulness.

"Maintenance and Repairs" is designed to serve three classes of readers. It describes money- and time-saving methods to men who are in charge of maintenance of large residential and non-residential properties. It shows how outside contractors handle certain types of maintenance work on a unit-cost, part-time basis. It indicates the part lumber and building material dealers play in furnishing materials for building maintenance and repair work.

While the department is new, much of the information published is of a type that has appeared regularly in *American Builder,* as reference to earlier issues will reveal. The new feature is that the amount of this material has been increased somewhat, and that it has been assembled in a single section for ready reference.

The need for building maintenance and repairs goes on, regardless of wars and regardless of restrictions on the use of building materials. The policy of our nation's war administrators is that we *must* take good care of what we have, for we can't get any more until after the war. That is a sound policy, for if ever the old adage about "a stitch in time" holds true it is in building repairs and maintenance. Few things go down hill faster than a neglected building, and few cost more to restore. For that reason the use of building materials for necessary maintenance, repairs and replacement is unrestricted, within reasonable limits. Despite this liberal policy on the part of our war administrators, natural wartime scarcities that have developed within the past year make it increasingly difficult to get certain needed materials, regardless of how worthy the user's intentions may be, or how great the need. These limitations call for substitutions, adaptation and a generous showing of resourcefulness, on which no priorities or ceilings can be placed. One purpose of this department is to show how buildings are being maintained with available materials, and to present new wartime developments in materials, equipment and methods.

The War Production Board is well aware of the importance of maintaining America's existing buildings, as shown by a recently announced revision of policy covering structural changes. The Board has arranged for operators of "substantial buildings" such as factories, office buildings, hotels, apartment buildings, institutions, public buildings and others to apply for blanket authorization covering construction work for a period of six months. This simplifying action eliminates the necessity for individual applications on the small construction jobs that are an almost constant necessity in larger buildings.

Blanket Application Now Made on PD-200 Form

The new plan allows all routine individual construction jobs, except those costing more than $5,000, to be included in the blanket application. When a building operates under a blanket application the maintenance department must file a PD-200 report form describing the work done, its cost and materials used. The blanket construction authority does not in any way change the procedure where priority assistance is needed to obtain materials. If priority assistance is required on a single item, application should be made on Form PD-1A, but if several items are required the usual PD-200 form should be used.

Size and scope of the market, and the variety of ma-



THE pictorial effect above dramatizes the wide field for wartime maintenance and repair covering a range of structures, both public and private. Work is all-inclusive, from the structure and finish of foundation, walls, floors and roofs, to all supplementary equipment.

terials required can only be estimated, for apparently no government agency or private statistical organization has been able to piece together the complete picture. It is generally recognized, however, that huge quantities of materials of all kinds are consumed each year for necessary maintenance and repairs, and that they include practically everything in the way of structural or finishing materials used in erecting the buildings originally.

Some idea as to size of the market can be obtained merely by considering a few figures on the number of structures of various types that comprise the major maintenance field. There were, for example, 184,244 manufacturing establishments in the United States in 1939. The plants that accounted for 85.5 per cent of the total industrial production spent that year for new construction or major alterations of buildings, $390,781,000.

There are in this country, 6,291 hospitals of all types, representing a capital investment in buildings, sites and equipment of $3,801,104,000. Repair and upkeep constitutes 7.4 per cent of their total operating cost, according to *Hospital Management*.

Census figures show that there are more than 600,000 multi-family dwellings housing three or more families; 27,987 year-round and seasonal hotels, of which approximately 3,300 are in cities of 500,000 or more population. In this field should be counted some 13,500 tourist courts and camps.

The nation's huge public housing program was converted into a war housing program in the summer of 1940. By May 1942 more than $1,334,000,000 had been authorized for Federally financed homes for war workers. In May 1942 there were under construction, or completed, 164,503 stationary family dwelling units, with 322,721 programmed. There also were 12,318 trailers and portable houses under construction or completed, with 18,090 programmed, and 17,782 dormitory units under construction or completed, with 58,221 programmed. It should be kept in mind that the majority of the permanent units in this program are large-scale housing projects. They are located in 43 states and the District of Columbia. Each of the large group developments necessarily includes a maintenance department, operated under direction of the local Housing Authority.

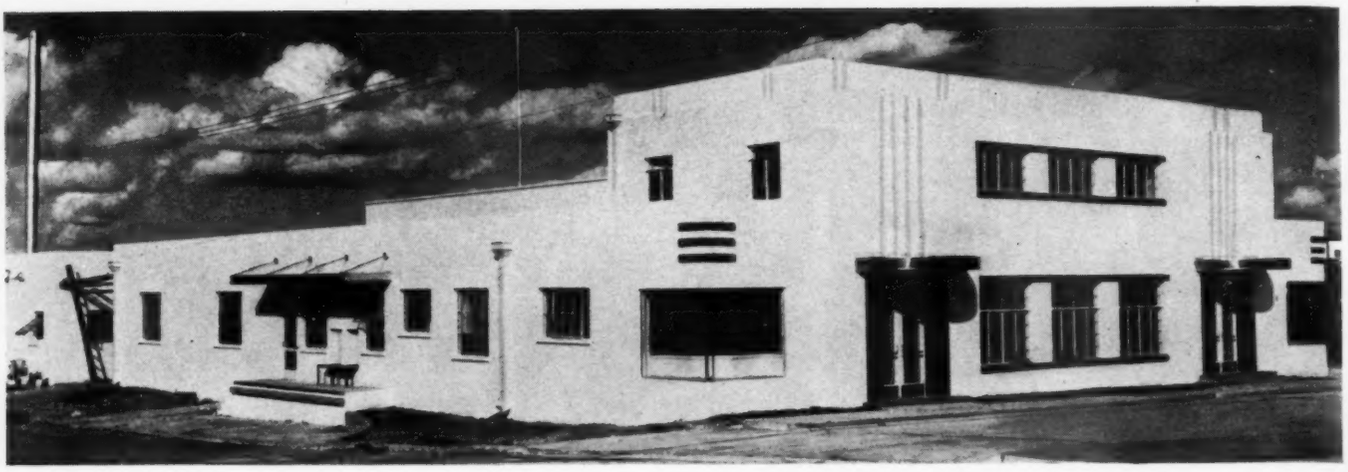
In the department store field there are 4,074 general merchandise stores, each of whose sales are in excess of $100,000 a year. There are more than 21,000 chain stores of all types with annual sales of $100,000 and over.

There are, in all, 229,394 schools in the United States, of which about half are one-room structures. The total value of school property, including buildings, sites and equipment is $7,115,377,402. There are 1,690 institutions of higher learning, many of which have numerous buildings under a well organized maintenance head or department. Public school expenditures for maintenance and repairs in 1937-8 totalled $76,314,876. Still another field is found in the nation's 16,000 theatres, which have a capital investment of $2,000,000,000.

Maintenance Volume Is Still Tremendous

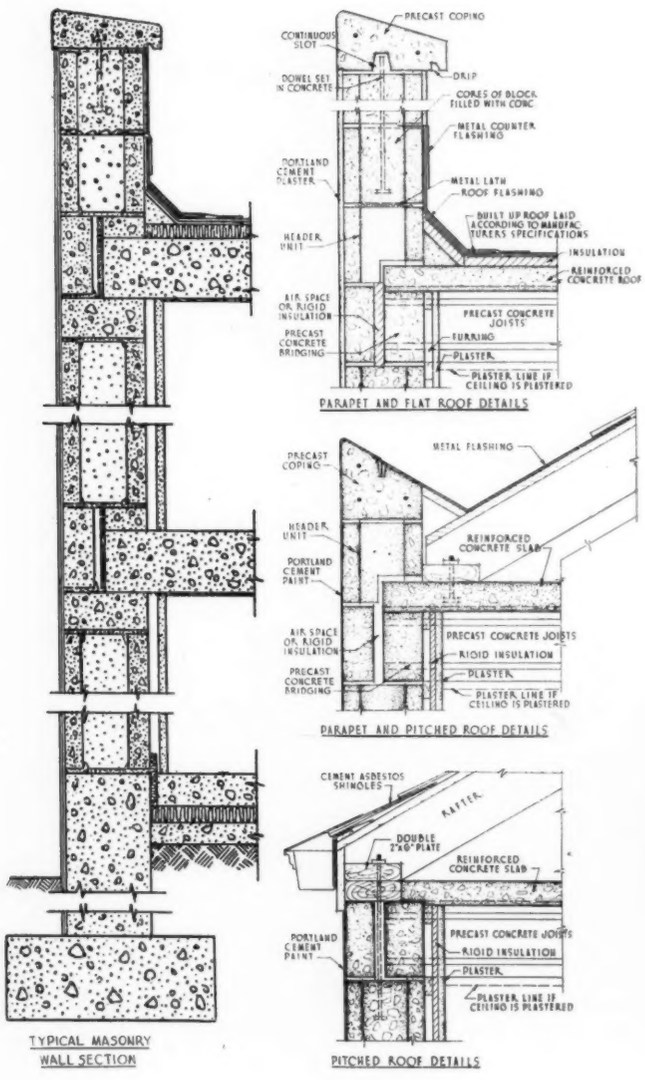
Figures are not available as to the amount of maintenance and construction work done in a typical year on the larger structures of the types just listed. Indications as to the volume of work are available, however, through records of FHA-insured loans on improvements of existing properties. In the year 1940, for example, there were insured 26,507 property improvement loans on commercial and industrial structures, involving $20,271,713 worth of work. Of this total, 5,905 jobs involved additions and alterations, and a total value of $6,841,149, an average of $1,158 per project. Since these jobs included altera-

(Continued to page 91)



Maintaining, Repairing and Converting Industrial Plants for War Work

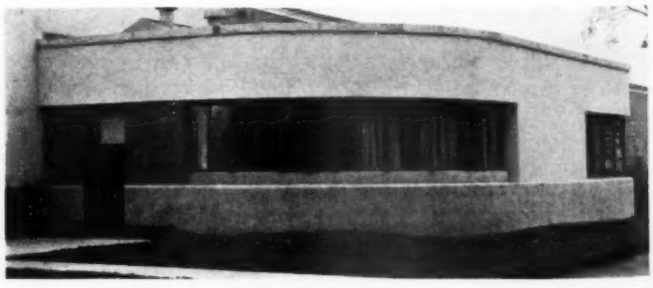
Non-critical concrete products play important role; floors must stand up



UNDER the present program to make better use of existing plant facilities, including both large and small concerns in decentralized locations, a final drive for conversion, expansion and repair of such properties is under way. To some extent this calls for adapting the plants of smaller manufacturers with arms sub-contracts to this new production for war. The maintaining of all plants at top efficiency is a constant part of the war production program.

Typical small industrial type buildings are pictured on these pages. These are of masonry construction and of a character adaptable to conversion. Sometimes such plants require little additional construction to complete a change-over. Frequently, however, a wing must be added.

Reproduced at the left are details of construction showing typical masonry wall section and three typical roof details. These would apply to the addition illustrated below, where an administrative office is added to an industrial building. It will be noted that this type of construction calls for a minimum use of



PICTURED ABOVE is the kind of plant addition which will be required in enlarging industrial facilities for war work where more space is needed for an engineering department, administrative office, etc. The details at the left show concrete masonry construction applicable to this and to numerous other plant expansions.



THE two buildings above, on this page and opposite, are examples of the type of plant now being converted to war production throughout the country. Rehabilitation and expansion of such facilities have become a most important job for the entire building industry.

critical metals; concrete joists, roof slabs, floors and walls are indicated. Finish is either portland cement plaster or paint applied directly to concrete masonry, or over rigid insulation board on furring.

In all such buildings the floors are particularly important to efficient production. In some plants which have been used for light manufacturing, it will be necessary to replace present floors with heavy-duty surfaces and in other cases resurfacing will be called for, either as part of the conversion or as maintenance. The following specifications for heavy-duty concrete floor finish and for resurfacing will be useful in undertaking this work.

Specifications for Heavy-Duty Concrete Floor Finish

1. Base Slab: The surface of the structural base slab shall be finished reasonably true and struck off at a level not less than 1 in. below the required finish grade.

As soon as the condition of the concrete base permits and before it has fully hardened, all dirt, laitance and loose aggregate shall be removed from the surface by means of a wire broom, which shall leave the coarse aggregate slightly exposed, or the surface otherwise roughened to improve bond with the topping.

When it is impossible to remove laitance and roughen the slab by brooming, the surface shall be cleaned and prepared for bond by chipping after the base has hardened.

Just prior to placing the finish the base slab shall be thoroughly cleaned by scrubbing, to the satisfaction of the engineer.

Note: When the wearing course is to be placed on same day as the base slab, only the first paragraph of this section should be used.

2. Portland Cement: Portland cement shall be of American manufacture conforming to the "Standard Specifications for Portland Cement" (Serial Designation: C9-38 or the "Standard Specifications for High Early Strength Portland Cement" (Serial Designation: C74-39) of the American Society for Testing Materials, and subsequent revisions thereof.

3. Aggregates: Fine aggregate shall consist of clean, hard sand or crushed stone screenings free from dust, clay, loam or vegetable matter and shall be graded from coarse to fine to meet the following requirements:

	Per Cent
Passing ⅜-in. sieve	100
Passing No. 4 sieve	95 to 100
Passing No. 16 sieve	45 to 65
Passing No. 50 sieve	5 to 15
Passing No. 100 sieve	0 to 5

Coarse aggregate shall consist of clean, hard gravel or crushed stone free from dust, clay, loam or vegetable matter, and from coatings which will tend to weaken the bond. It shall contain no soft, flat or elongated fragments and shall be graded to meet the following requirements:

	Per Cent
Passing ½-in. sieve	100
Passing ⅜-in. sieve	95 to 100
Passing No. 4 sieve	40 to 60
Passing No. 8 sieve	0 to 5

All aggregates shall be selected with care and shall be of an approved character. Samples of proposed material shall be submitted to the engineer for approval prior to use.

4. Mixture: The nominal mixture shall be 1 part of portland cement, 1 part of fine aggregate and 2 parts of coarse aggregate by volume. This nominal mix may be slightly varied, depending upon

(Continued to page 92)



AT the left is shown a heavier type of concrete construction in a plant suitable for turning out larger pieces of war equipment. A heavy-duty floor is required in this case.

Government Pushes Campaign To "Convert-Conserve"



THE CREDIT FACILITIES of more than 5,000 private lending institutions operating under the FHA's Title I program are available to assist contractors and home owners in carrying out the heating and fuel economies so essential to the nation's war effort, Federal Housing Commissioner Abner H. Ferguson has declared in a statement to the building industry.

Because of wartime pressures on transportation, savings in consumption of fuel will become imperative during the approaching winter months, particularly in those areas where the supply of fuel oil will be sharply curtailed, Mr. Ferguson said.

In recognition of the urgent need for fuel conservation, the Board of Governors of the Federal Reserve System has amended its Regulation W, restricting the terms of most types of consumer credit, to exempt loans used to finance the conversion of heating equipment from one type of fuel to another, or to reduce fuel consumption by better insulation.

As a result, home owners financing such fuel-saving measures through FHA Title I loans can receive the maximum terms permitted by the National Housing Act. Such loans may run for as long as three years and are repaid in equal monthly installments.

Home owners in areas of short fuel-oil supplies who now heat their houses with oil burners may now finance the conversion of their furnaces to the use of coal through FHA insured Title I loans, thereby assuring the comfort of their families during the winter months as well as helping in the solution of the critical oil problem.

Similarly, by installing improved insulation, or storm doors, storm windows and weatherstripping, home owners can keep the heat *in* their houses and the cold *outside*. This will reduce fuel consumption, slash next winter's heating bills, and result in more comfortable,

WARTIME GUIDE TO BUILDING MATERIALS AND FHA TERMS FOR—

REMODELING —to House War Workers

The Job . . .

Alterations, rehabilitation, extensions or additions to provide additional living accommodations for war workers. (See WPB Order L-41, *also PD-406 and PD-105.)*

Where It Can Be Done . . .

In designated Defense Housing Areas.

Financing . . .

Through FHA's Title I Plan—loans up to $5,000—terms as long as 7 years—payable in monthly installments. (Federal Reserve Board Consumer Credit Regulation W is waived for this work—use NHA Form 38.) See any FHA qualified lending institution.

Authorization To Begin Construction . . .

Remodeling costing less than a total of $200, and requiring the purchase of no critical materials, can be started without an "Authorization to Begin Construction." (If purchase of critical materials is required, see "Critical Materials", paragraph below.)

Remodeling costing a total of $200 or more and requiring the purchase of no critical materials: An authorization to Begin Construction must be secured under WPB Order L-41. Apply at nearest FHA office on WPB Form PD-200. (If purchase of critical materials is required, see paragraph below.)

When Critical Materials Are Required . . .

Remodeling requiring $800 of critical materials or less: (But in no case to exceed $100 times the number of rooms.) Make application for critical materials needed on WPB Form PD-406 to the nearest FHA office. This procedure is followed when critical materials need to be purchased, whether or not the total cost of remodeling exceeds $200.

Remodeling requiring over $800 of critical materials: Make application for critical materials needed on WPB Form PD-105 to the nearest FHA office.

INSTALLATIONS —to Conserve Fuel

The Job . . .

In view of urgent necessity to conserve fuel, the Petroleum Coordinator, the WPB and other agencies have taken steps to encourage and facilitate the conversion of heating equipment from one type of fuel to another and other methods of fuel conservation (insulation, storm doors and windows, weatherstripping, etc.).

Where It Can Be Done . . .

(a) In the East—conversion of oil burners to coal, insulation, etc. (b) Throughout Country—general fuel conservation through insulation, etc.

Financing . . .

Through FHA's Title I Plan—loans up to $2,500 —terms up to 3 years. (Federal Reserve Board Consumer Credit Regulation W waived for this work. See Amendment 6.)

See any FHA qualified lending institution.

Materials . . .

Heating Equipment—WPB Plumbing and Heating Order L-79 specifically exempts from its restrictions the sale or delivery of any equipment which is to be used for the purpose of converting oil-burning equipment or gas-burning equipment to coal-burning equipment.

Construction connected with conversion of Heating Equipment in East. The WPB "Stop Construction" Order (L-41) does not apply (Amendment b) to construction commenced prior to January 1, 1943, which is necessary to the conversion or substitution of heating equipment to permit the use of fuel other than oil, electrical, natural gas or mixed natural and manufactured gas in the Eastern States.

Insulating Materials—Many types of insulation, storm doors and windows, weatherstripping, etc., are not critical, and for the purpose of conservation of fuel may be obtained from dealers and suppliers.

REPAIRS —to Maintain Property

The Job . . .

Work necessary to keep a building in working condition, and repair or restoration, without change of design, of any portion of a building rendered unfit for service. (See WPB Order L-41.)

Where It Can Be Done . . .

In or out of designated defense areas.

Financing . . .

Through FHA'S Title I Plan—loans up to $2,500 —payable in monthly installments. (Terms are subject to Federal Reserve Board Consumer Credit Regulation W.) See any FHA qualified lending institution.

Materials . . .

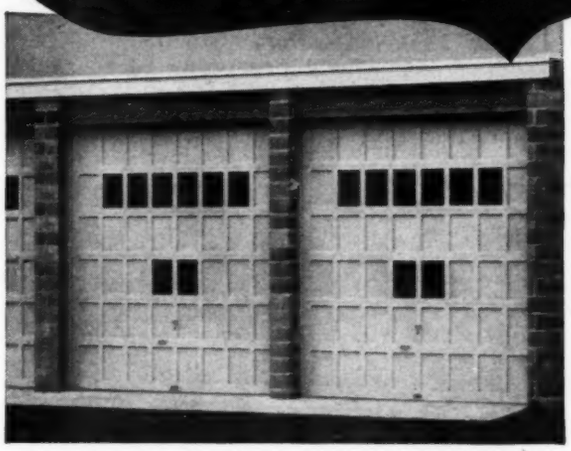
Plumbing and Heating Emergency Repairs: To repair or replace essential plumbing and heating equipment the supplier may (under WPB Preference Rating Order P-84) apply a Preference Rating of A-10 to orders to secur such equipment or to replace his inventory. If the cost of equipment is more than $50, the ultimate user must certify the installer's purchase order.

Electrical Equipment and Hardware: The WPB seeks to keep suppliers adequately stocked with electrical equipment and hardware essential for maintenance and repair work. Materials in retailers' stocks may be purchased in small quantities required for essential maintenance and repair without priority assistance. For certain essential items not available, the WPB recommends that application for priority assistance be made to the nearest WPB office on Form PD-1a by the ultimate user or his contractor. NOTE: This method is resorted to only after a thorough canvass of retailers in the territory has been made for the item required.

Other Materials—allowable for maintenance and repair may be obtained from the stocks of local suppliers, whose inventories the WPB is making an effort to maintain. For many of these items the distributor or supplier may replace his inventory through WPB procedure established under Order L-63 using Form PD-1x.

Here in brief—are the three main channels through which FHA's Title I plan now operates to create war housing and further the government's broad conservation program.

There's a Lot of "FIGHTING SPIRIT" in these Husky Doors!



State Armories, Framingham, Mass. Equipped with 54 Ro-Way Doors. L. Santucci, Arlington, Mass., Contractors.



"QUICK in Action"

"QUIET in Operation"

"TOUGH in Service"

"TRIM in Appearance"

That's why in the Armed Services and essential War Industries, you will find in use so many . . .

Rō-Way Overhead Type Doors

Today Ro-Way Doors Are Serving America In

Naval Depots	Munition Factories	Armories	Cantonment Camps	Submarine Bases
Air Bases	Torpedo Stations	U.S.O. Buildings	Navy Yards	Marine Bases
Navy Proving Grounds	Coast Guard Bases	Ordnance Plants	Bomber Plants	Army Proving Grounds

These Exclusive Features Make Rō-Way Doors as Modern as Today's Weapons of War!

"Crow's Foot" Outer Bearing Support—Rigidly holds the chain sheave wheel in permanent alignment. No twist . . . no sag to cause friction.

"Zip-Lock" Adjustment—Used on Ro-Way Doors having Twin Torsion Spring Power. Permits instant easy adjustment of spring tension.

"Tailor Made" Springs—Each spring is individually made for the Ro-Way Door on which it is used. Each is power-metered to the weight of the door.

Track Rollers—Made on our own specially-designed machines. All Rollers have "double thick" wearing tread, and full ball bearing (7 to each roller.)

New Friction-Reducing Track—Track is formed so rollers ride well away from the track side wall, giving extra clearance and easier operation. This track design also gives extra strength and rigidity. No counter-sunk holes in track—no flat head stove bolts used.

Rust-proof Hardware—All Parkerized and Painted *after* fabrication.

You will better understand the widespread choice of Ro-Way Overhead Type Doors when you examine these exclusive improvements and see the extra values they give.

Write for detailed information and prices on Ro-Way Doors for Industrial and Commercial use.

ROWE MANUFACTURING CO. 755 Holton Street Galesburg, Ill., U.S.A.

Rō-Way

OVERHEAD TYPE DOORS

"There's a Ro-Way for every Door way!"

healthier living conditions. Such improvements also can be financed under the Title I plan.

A new building industry campaign, "Convert! Conserve!" is suggested by Washington to help solve the present acute fuel shortage. Here is the coordinated Government Program:

1—Petroleum Coordinator Ickes has requested fuel dealers to urge people in "shortage" districts to convert their oil burners to furnaces using other fuel.

2—The War Production Board has amended Conservation Order L-41 to make available in Eastern States building materials which are necessary for the conversion or substitution of heating equipment now using fuel oil.

3—The Federal Reserve Board has amended Regulation "W" to exempt loans used to finance the conversion of heating equipment or the installation of storm sash and insulation.

4—FHA-Plan loans are now available for various types of installations to conserve fuel—as well as for remodeling to house war workers and repairs to maintain property.

Obviously, the fuel situation is of grave national concern. It is not merely a local problem for Eastern States where oil supplies are already low. . . . It extends—or will extend—to many other parts of the country where fuel depends on transportation facilities or has been diverted to industry. Home owners everywhere are being urged to conserve fuel regardless of whether they burn oil or coal, or even gas.

The emphasis, therefore, must be centered on winter-proofing homes. And that is a job for every member of the building industry to sell right now. In Eastern States, in houses where there is an oil burner of a type which lends itself to conversion, the cost of this conversion may be included with the cost of winter-proofing in an FHA-Plan loan which the home owner has ample time to pay off by the month.

There are many types of winter-proofing which dealers and contractors can sell on the FHA Plan. Insulation is a large item. Attic insulation, at the very least; a full insulation job where possible. Storm windows and storm doors help save heat, and in many cases storm vestibules can be sold. Weatherstripping should also be included in selling a complete heat conservation job.

Here is how the new FHA terms for fuel conservation work out:

Suppose the cost of converting the oil burner is $45. Winter-proofing to reduce fuel consumption—and at the same time to keep the home healthful—might include attic insulation. Just as an example, say the insulation costs about $53, and installing storm sash and doors costs another $70. The dealer or contractor can help the home owner procure an FHA-Plan loan for the entire amount of $168 from an approved bank or other lending institution in the community. No down payment is required where the financing is used for fuel conservation. On a two-year basis, the payments would be $7.72 a month. If the loan runs the maximum term of 3 years, the monthly payments made by the home owner would amount to only $5.38. Of course, the dealer receives prompt cash payment, in any event, for the entire $168.

By featuring winter-proofing now on monthly FHA-Plan payments, the building industry can render major assistance to the national fuel conservation program.

Separated Units Reduce Fire Hazard

DUE TO INCREASED wartime industrial activity and to the demands of our armed forces for Diesel engine driven generator plants, it became evident early in the year that greatly increased manufacturing facilities would be required by the Ready-Power Company, Detroit, Mich. Consequently, plans were made by the company engineers for the erection of a new plant and for a rearrangement of existing facilities to accomplish this purpose. Originally the plans called for a single story brick, steel and concrete manufacturing building, of approximately 33,000 sq. ft. and three temporary wooden buildings with an additional 11,000 sq. ft. of floor space. The contract was placed with the Heiss Construction Co., Detroit.

The temporary wooden buildings were quickly erected and were actually placed in service before priority details on the larger permanent building were completed. Due to a scarcity of steel, and the delay in securing priority assistance for the erection of a large building, the Ready-Power Company found itself faced with the necessity of either making a complete new set of building plans, or erecting temporary wooden buildings as a substitute. Time being the vital factor in the program, the latter course was followed.

Detroit's building regulations do not permit the erection of a wooden structure of over 5,000 sq. ft. of floor space. Fortunately, the proposed manufacturing operations could be divided up into seven separate and distinct classifications, each requiring about an equal amount of floor space. This made possible the erection of seven identical manufacturing buildings each housing, respectively, the stores department, electrical assembly, power plant assembly, machine shop, carpenter shop, and blacksmith shop. Two storage buildings and an office building complete this plant layout. Each manufacturing building and the office building is 60′ x 80′ long, and has its own hot air heating plant. To conserve heat and to keep temperature comfortable in the summer, the buildings are insulated throughout with fiber board.



CRITICAL MATERIALS CONSERVED in this new plant for The Ready-Power Company, Detroit, Michigan. Eight wooden unit buildings, each 60′ x 80′, give required floor space, light, air, and break up fire hazards.



SIMPLE FAST SAFE

LOCKING LEVERS IN SAFETY ZONE!

The MONARCH UNI-POINT RADIAL SAW

Gives operator split-second adjustments with utmost safety. See how locking levers for horizontal, vertical and compound angle adjustments are in safety zone in front of and below the table. So convenient! So very safe! No dangerous reaching back over machine to raise or lower saw. Then, too, the latest type saw guard with adjustable hand knob *in front* and with kick-back preventer, standard equipment, makes MONARCH UNI-POINT still safer.

To this super-safety is added speed, *speed*, SPEED—with marvelous accuracy! The UNI-POINT saw always enters the work at the same point regardless of cross-cut angle. This feature alone quickly pays for the machine in time and labor saved.

Get in step with today's tempo! Install UNI-POINT for faster mass production. Let UNI-POINT help to break your bottlenecks; increase your daily volume; eliminate obsolete machines and methods. Enjoy the unobstructed space above table afforded by the telescoping ram. Enjoy the convenience of the automatic stops,—the elimination of laborious adjustments and of frequent replacement of guide fence!

Discover for yourself the superiority of this machine by installing a UNI-POINT on your next job. Write us for name of nearest dealer and let us send you further details.

UNI-POINT DOES EVERYTHING AND DOES IT ACCURATELY



We also manufacture modern designed Saw Benches, Band Saws, Jointers, Planers, Lathes, Shapers, Mortisers, Sanders, Swing Saws, and a complete line of Saw Mill Machinery. Send for catalog 60.

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TRADE MARK REG. U. S. PAT. OFF.
UNI-POINT RADIAL SAW

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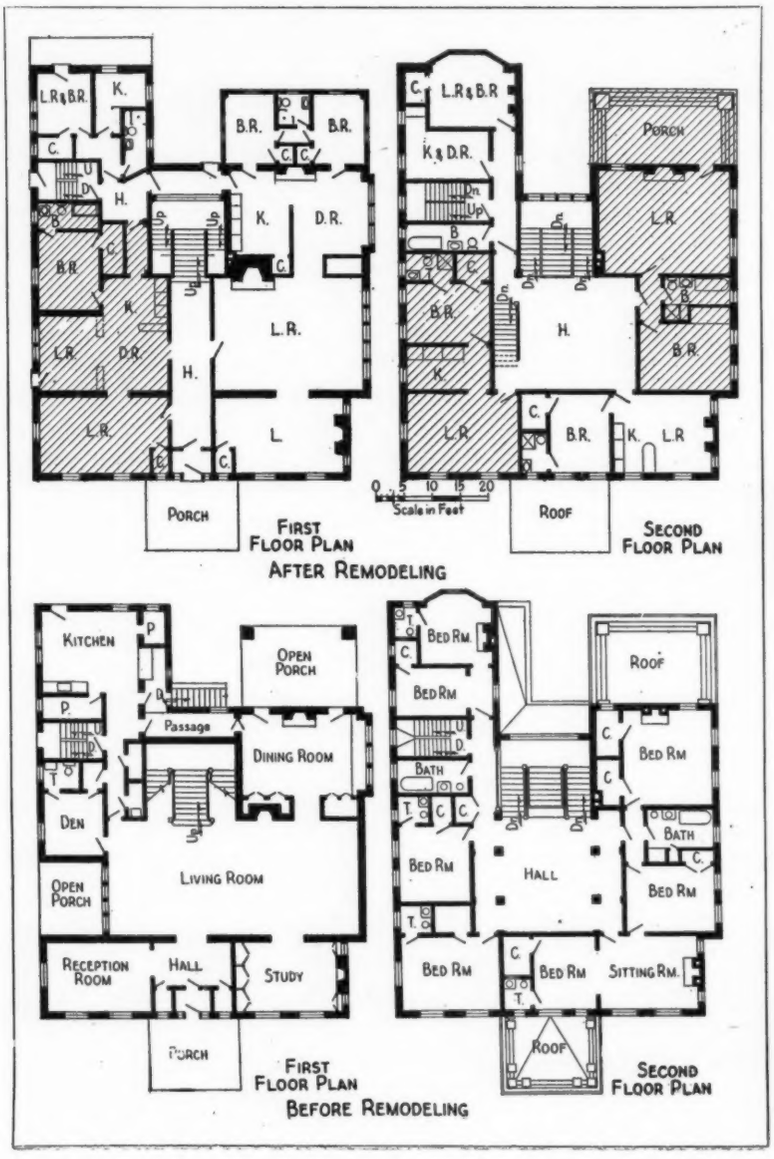
Baths Are Key to Conversion of Mansion to War Housing

CONTRACTOR Charles J. Mumford of Mishawaka, Ind., is the proud owner of the impressive mansion shown at the left. He can well be proud of it because, as well as providing a home for his family, he has done an excellent remodeling job in providing the additional housing for six war worker families.

He had many practical ideas on cutting up this large old home into seven apartments —three on the first floor, including his own, and four on the second floor. The third floor of the building was formerly a ballroom. Although no changes have yet been made in this part of the house, Mr. Mumford later intends to convert this into three additional apartments, each with its own private bath.

The baths were naturally the key factor controlling the alterations. It so happened that existing plumbing and pipe lines were located to serve toilet-lavatories in spaces relatively compact. The answer, of course, was to add a shower where there was not room for a tub.

For this purpose, four Weisway "Model V" cabinet showers were installed (see "after" plans). This new piece of equipment was created to meet critical material limitations of WPB. In commenting on their installation in this job, Mr. Mumford said, "These cabinet showers are keeping abreast of present day requirements and fill the economic need in rehabilitating old homes; they are space savers in new types of homes and apartments, and are practical, sanitary and efficient." The plumbing contractor was Trippel Plumbing and Heating Company of Mishawaka.

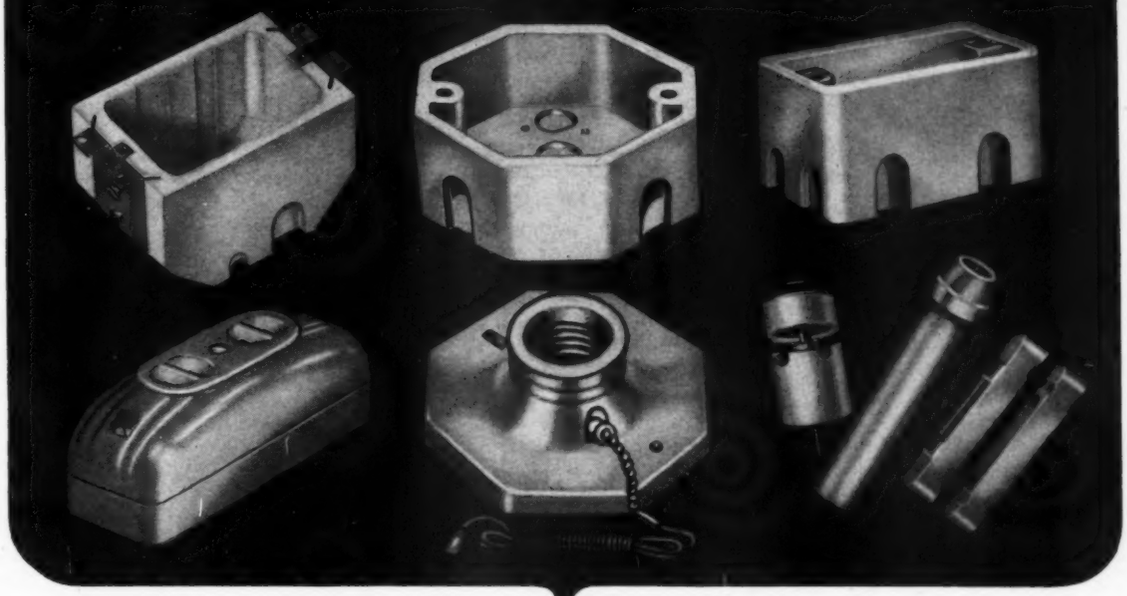


THE impressive home shown at the upper left, once the residence of a well known Mishawaka, Ind., industrialist, was converted into seven war worker apartments, as plans indicate; space-saving cabinet shower, below, allowed closets to become baths.



Build for Victory

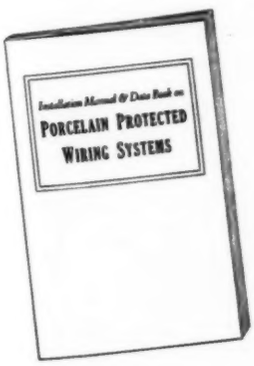
With PORCELAIN Outlet Boxes



ALL WAR CONSTRUCTION CAN PROCEED

Get this Book FREE.

It tells you how to install PORCELAIN PROTECTED WIRING SYSTEMS



Meet all the requirements of the "War Emergency Code" for wiring Army, Navy and private construction with Porcelain Protected Wiring—the wiring method that conserves the greatest amount of critical materials for our War Effort.

Porcelain Protected Wiring is the most recent and modern development in wiring practice. It provides complete insulation and protection from entrance switch to the last outlet on the system. Outlet boxes and switch boxes made of insulating, shock-proof PORCELAIN replace old-style boxes of current-carrying materials.

Porcelain boxes can't rust and are not affected in the least by heat, cold, chemicals, or corrosive atmospheres.

You can now secure, in any required quantity, a complete line of Porcelain outlet boxes, covers, and receptacles, knobs, cleats and insulators.

Cooperate with our War Leaders—use this safe, modern method of Wiring—it will help win the war and help you to more profits on every job.

Write any of the companies below for information.

ILLINOIS ELECTRIC PORCELAIN CORP., Macomb, Illinois
KNOX PORCELAIN CORP., Knoxville, Tennessee
PORCELAIN PRODUCTS, INC., Findlay, Ohio

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NEW TOOLS, MATERIALS AND EQUIPMENT OFFERED

AB937 "Ames Metal Mouldings" are presented in a new catalog, the 7th Edition, from the Ames Metal Moulding Co., Inc., 225 E. 144th St., New York City. This is an illustrated catalog of 12 pages and covers, presents an extensive line of metal mouldings and wood covered metal mouldings.

AB938 The General Electric Co., Schenectady, N. Y., has brought out a new 12-page illustrated data sheet on its line of varnished-cambric cable. Much useful data is presented for those planning, installing or servicing electric power installations.

AB939 Pass & Seymour, Inc., Syracuse, N. Y., has recently released its General Catalog Number 42, "P. & S Wiring Devices." This is a big book of 76 pages and covers, thoroughly illustrated and indexed, and presenting every type of electric wiring device.

AB940 "Decorative Walls by Tile-Tex" is a very attractive 8-page brochure in full colors from the Tile-Tex Co., Chicago Heights, Ill. It presents facts about Tile-Tex wall tile, with specification data and working details showing how they are applied; 32 different colors and patterns are illustrated, and numerous suggestions for decorative walls are included. Uses in the home and in retail food stores are featured.

AB941 An educational folder has been received from the Department of Forestry, Michigan State College, East Lansing, Michigan. This bulletin announces the new "Housing and Lumber Merchandising Course" and gives complete schedule of classes for the four college years of three terms each which are offered young men and women desiring to fit themselves for competent service in this field.

AB942 "How to Build Southern Pine Barns and Implement Sheds" is the title of a new design book from the Southern Pine Association, New Orleans. It contains 14 designs of modern barns and 4 plans of implement sheds. Dimensioned and detailed drawings and building material lists are included. Various types of roof systems are presented, including the more recent glued laminated rafter. This book is priced at 25 cents per copy.

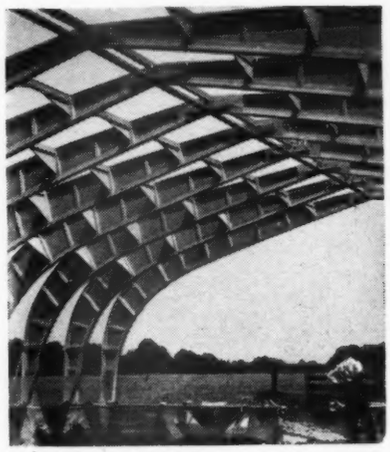
AB943 A fluorescent accessories catalog, 16 pages, is announced by the General Electric Co., Appliance & Merchandise Dept., Bridgeport, Conn. It contains general and technical information on fluorescent lighting principles, and gives complete descriptions of many G-E fluorescent lampholders, starters, starter sockets, etc. The new G-E Master No Blink Starter is described in a special insert.

AB944 "The Architect's and Engineer's Data Book" by Westinghouse is a new 178-page book designed to give architects and engineers full information on the application, specification, and price estimating of Westinghouse motors, transformers, protective devices, circuit breakers, load centers, panel boards, stokers, elevators and household equipment. This book is available from department 7-N-20, Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.

AB945 "Construction Glues" is a new publication from I. F. Laucks, Inc., 911 Western Ave., Seattle, Wash. Contents of the first issue include detailed information on construction glue technique, especially pertaining to laminated arches; also the use of glue in erecting prefabricated housing units, and other innovations in the field of wood and glue construction. Through this new publication the Laucks organization will undertake to answer specific questions on the construction uses of glue.

AB946 "Blackout Your Windows but *Not* Your Ventilation" is the title of a new bulletin just issued by the Ilg Electric Ventilating Co., Chicago. This is a 4-page data sheet on Ilg Dark Room Ventilators in three sizes, delivering 350, 450 and 750 C.F.M., respectively.

AB947 Technical data about plywood is included in a new handbook of the Douglas Fir Plywood Assn., Tacoma, Wash. This handbook consists of a substantial binder with inserted sheets grouped in three sections: (1) Physical properties of fir plywood; (2) designing with plywood; and (3) prevention of condensation in walls. Tables, charts and diagrams relating to strength properties under tension, compression, flexure and shear supplement the test. This handbook is edited by N. S. Perkins, chief engineer of the Association.



PLYWOOD ARCHES for naval buildings, airplane hangars, barns, etc., have plywood arch beams for strength and unobstructed floor area—new handbook shows how.

AB948 "Blue Bond for Masonry" is a neat pocket-sized booklet of 20 pages and covers from the North American Cement Corp., 285 Madison Ave., New York City. It includes valuable reference tables for the determination of mortar quantities and the number of masonry units required for various types of construction.

AB949 "Electric Power Trucks" and a companion piece, "Gas Power Trucks," are 8-page data sheets on material handling equipment by Lewis-Shepard Sales Corp., Watertown, Mass. The models illustrated are the fork type, telescopic lift style, a great help in factory production and in handling heavy supplies in and out of storage.

SERVICE COUPON—CLIP and MAIL to CHICAGO

Readers Service Department, **(October, 1942)**
American Builder,
105 W. Adams St., Chicago, Ill.
Please send me additional information on the following product items, or the catalogs, listed in this department:

Numbers .....

Name .....

Street .....

City ..... State .....

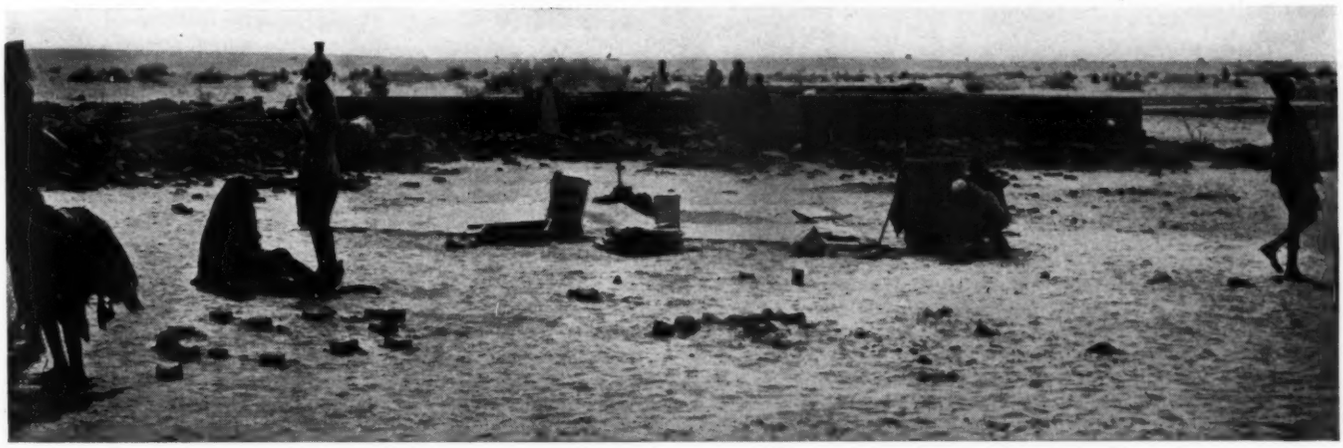
OCCUPATION* .....

.....

***Please note that occupation must be stated if full service is to be given**



"Colonel, you're expected in Africa ... Saturday!"



In fighting this global war America must send men and material over all the oceans to all the continents of the world.

Indispensable in the stupendous transportation job that this involves is Pan American Airways, whose mighty Clippers are flying military men, key officials and critical supplies to every far-flung front.

It is betraying no military secret to show, above, a PAA flying field under construction "somewhere in Africa". Nor to reveal that the cement used was Lehigh, as the bag to the left of the dozing native shows.

Lehigh Early Strength Cement has been used in countless war construction jobs, both at home and abroad, to save priceless construction time. For, when concrete must be made ready for service in a hurry, Lehigh's Early Strength Cement will do the job in 1/3 to 1/5 the normal time.

In wartime, speed is often Factor No. 1; but there are many other advantages besides speed that the use of Lehigh Early Strength Cement provides, which peace-time construction cannot ignore. Ask the Lehigh Service Department for details.

Lehigh EARLY STRENGTH CEMENT
for service-strength concrete in a hurry

LEHIGH PORTLAND CEMENT COMPANY • ALLENTOWN, PA. • CHICAGO, ILL. • SPOKANE, WASH.

Lehigh gets in the scrap!

Since Pearl Harbor, Lehigh has salvaged and turned over to the war effort 19,155,959 lbs. of iron and steel scrap . . . 123,984 lbs. of copper and brass scrap . . . and 15,719 lbs. of rubber scrap.

Getting Along with Less of Critical Materials

Plumbing Industry Makes Greater Use of Ceramics, Releasing Iron and Brass

BECAUSE iron and brass are needed for munitions and ordnance production, manufacturers of plumbing fixtures and fittings are turning to an increasing extent to ceramics, according to the Plumbing and Heating Industries Bureau.

Ceramic materials suitable for the production of plumbing items are plentiful and non-critical. Not only are ceramic materials themselves non-critical but no scarce metals needed for the war effort are required for tools and dies. Ceramic materials are adaptable and thus lend themselves to varying rquirements.

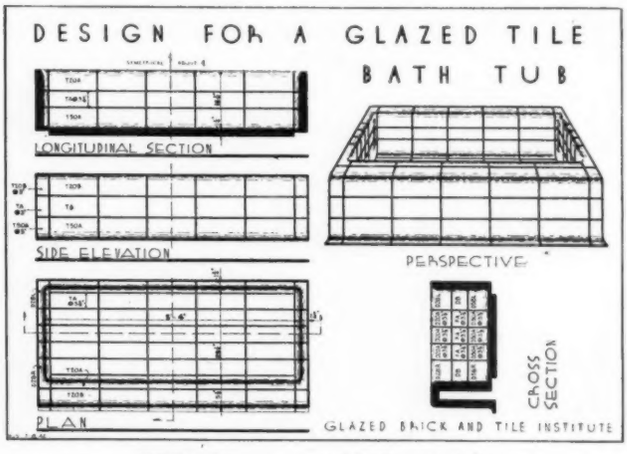
The clays which are used for the production of plumbing fixtures and fittings of vitreous china and earthenware are found in abundant quantities in nearly all states but particularly in the states along the east coast. While all manufacturers are depending largely on domestic clays, fine European ball clays are still used as a principal material in the production of vitreous china fixtures. Inasmuch as freighters returning from England need ballast, no shipping problem is involved.

Not only has the production of vitreous china lavatories, closets, and laundry trays grown tremendously in recent months, but many new uses have been found both for earthenware and vitreous china. Flat rim sinks, grease interceptors, shower heads, and escutcheons are now being made of ceramics instead of critical iron and chromium plated brass. Thus the plumbing industry is able to meet the requirements of a large military, naval, and industrial housing program without the use of critical metals for fixtures.

In converting to direct war production the manufacturing facilities formerly used for the making of cast iron enameled ware and brass goods, plumbing manufacturers have patriotically subordinated their personal interests to the paramount need of maximum national offensive strength for victory.

Glazed Tile Bath Tub Offered

BATHTUBS may be constructed of glazed tile to conserve critical war materials, and can be assembled from standard tile shapes as manufactured by members of the Glazed Brick and Tile Institute, according to detailed information released by the Structural Clay Products Institute, Washington, D. C.



TILE tub uses no critical materials.

The symbols appearing on the drawing herewith are shape numbers for the standard units as shown in the catalog of the Institute. Bullnose caps, cove bases, and internal coved corners with fittings are used to provide rounded corners at all possible points.

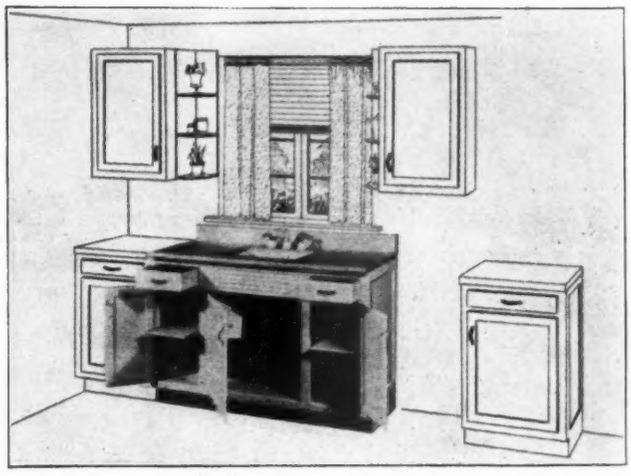
Glazed brick and tile are widely used for indoor and outdoor swimming pools and therefore have been used successfully under conditions similar to those that would be expected in the case of bathtubs. While no bathtubs have been constructed by the Institute for experimental purposes, the feasibility of such an adaptation is apparent, and is presented here as a timely suggestion.

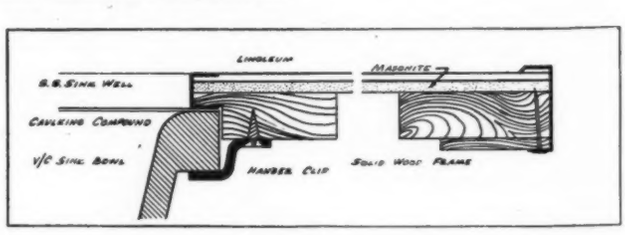
A membrane type of waterproofing should be built into the base, over which would be placed a thin setting bed of mortar. One-quarter inch, flush mortar joints are recommended and the mortar should consist of a rich mixture containing fine sand, and possibly a waterproofing admixture.

The weight of the glazed tile tub as shown would exceed in weight only slightly that of the ordinary metal tub. The weight of the tile tub is estimated to be 600 lbs., based on actual weights of the tile units. This value is also the approximate weight of the water which the tub can hold. Metal tubs weigh from 450 to 550 lbs. Distributed, the weight of the tile tub would be about 50 lbs. per square foot, and when filled, double that amount.

Mutschler Offers Hardwood Cabinets

IN A RELATIVELY obscure but far from insignificant way, Mutschler Brothers Company, Nappanee, Ind., is contributing to the housing program through the *V-Line* of hardwood kitchen cabinetry equipment and cabinet sink combinations. In its development emphasis has been upon multiple unit proj-





MUTSCHLER sink and associated cabinets; below is detail of sink, drainboard construction.

ects (involving 15 or more kitchens) and the special requirements which they present.

By taking advantage of short cut production methods, and less costly construction and fittings, a price level has been achieved which is in line with government allowances. Special consideration has been given to the elimination of critical

(Continued to page 64)

INSULITE
IN TODAY'S BUILDING

Today, the watchword in all types of construction is speed.

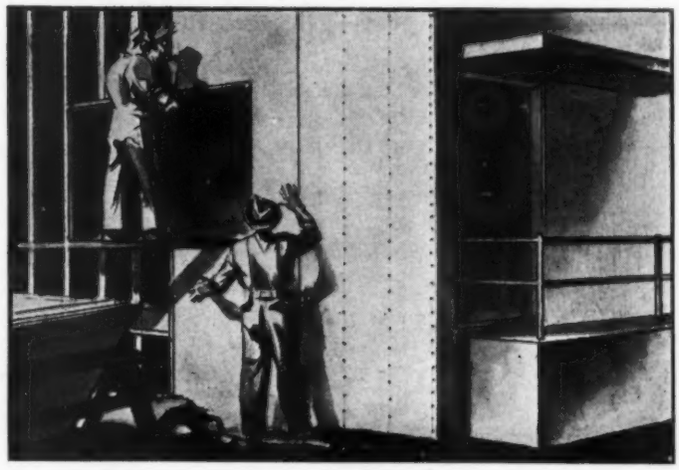
Buildings must be built quickly. Man hours of labor must be saved. In this emergency, Insulite has many advantages.

. . . Buildings constructed with Insulite go up rapidly, because the large panels of Insulite are quickly, easily applied. This saving in time and labor is highly important for an early victory.

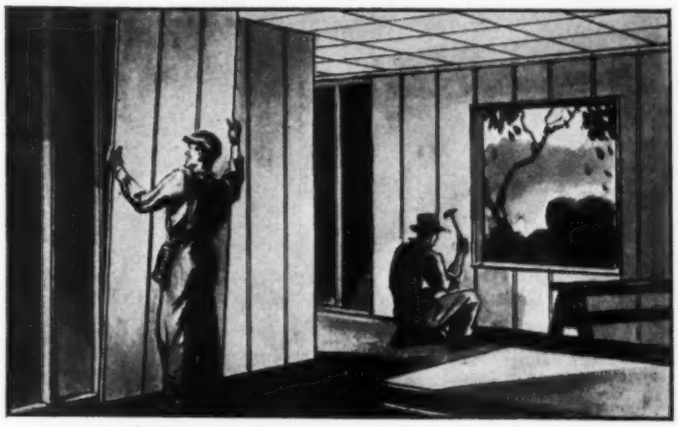
. . . Homes built with Insulite require less fuel to heat, because Insulite *insulates as it builds.* With fuel being rationed, every saving counts.

. . . Homes built with Insulite require a minimum of critical materials.

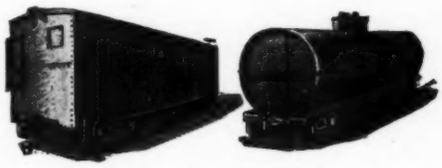
For rapid construction today, for enduring construction through the years to come, build with Insulite.



Saves Time: Houses built with Insulite go up in a short time. The large panels of Insulite Bildrite Sheathing are quickly applied and nailed into place.



More Time Saved: On interior walls, Insulite again saves time, as Insulite creates serviceable attractive interiors, without plastering, papering or painting. That's a big saving in time.



Consider Transportation: Insulite relieves transportation in two ways. First—Insulite requires a minimum of space in freight cars. Second—every car of Insulite used in home construction saves half a car of fuel oil each heating season.



Consider the Future: Regardless of how quickly we must build today, remember the future, too. Houses constructed with the Insulite Approved Wall of Protection are houses that will endure for years after the war is over—houses insulated by a *double wall* of protection.

INSULATE WITH

INSULITE

THE ORIGINAL WOOD FIBRE STRUCTURAL INSULATING BOARD

INSULITE
Minneapolis, Minnesota

MANDO

Division of
Minnesota and Ontario
Paper Company

REG. TRADEMARK

LESS OF CRITICAL MATERIALS

(Continued from page 62)

materials in the development of the V-Line. Cabinetry of *hardwood* trimmed with approved door and drawer pulls, *hard maple* sink and counter tops, *vitreous china* sink bowls, and an approved type of deck faucet and spray. The pre-fabricated completely finished units of the V-Line are delivered to the job ready for installation which may be accomplished in a few hours. Many expensive man-hours in vital production areas where man-hours are scarce may be conserved through the use of pre-fabricated cabinetry.

Located in an area isolated from other war production and the accompanying labor shortage, possessing excellent plant equipment, and utilizing materials not critical and comparatively easy to obtain, Mutschler Brothers Company is in a position to maintain a constant production of pre-fabricated kitchen units which may be delivered to the job at the time specified in the building schedule. The scope of the V-Line is not limited to the use of the units indicated on the following specification chart. Any reasonable size or type of unit will be considered for manufacture provided a sufficient quantity is involved.

Curtis Markets Victory Locker

RECENT trade paper advertising has featured the new Curtis "Victory Locker," introduced by Curtis Companies Incorporated, Clinton, Iowa. This new product is suitable for all locker needs and might be readily termed an "all-purpose" locker. It is as suitable for schools, gymnasiums and factories as it is for use in war buildings and other types of government construction.

Unique construction features make this new locker an outstanding value for today's market. It is entirely of wood. It is painted olive green. The locker is shipped KD with all parts pre-fit and may be quickly assembled with minimum labor. It's light, durable and strong.

In commenting upon this new Victory locker, Mr. H. H. Hobart, Vice-President and Sales Manager of Curtis Companies Incorporated, stated:

"We believe in this Curtis Victory locker we have a product that will fill many important needs. We have made different types of lockers for the government and now we have standardized this unit in design and construction and can make it to sell at a price that will compare favorably with any locker on the market. It may be sold by Curtis dealers in big quantities, we feel."

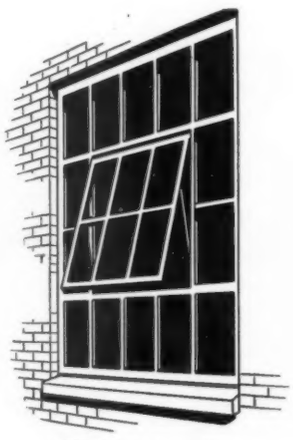
New Pella Projected Wood Sash

THE Rolscreen Company, Pella, Iowa, has just announced a new, strong, neat appearing projected wood sash designed for both old and new commercial construction.

Outstanding feature of this new projected wood sash is the fact it is obtainable in standard units with glass sizes reduced to maintain standard steel opening sizes. It is also available with full size glass and a corresponding increase in opening dimensions, at no additional cost.

This new sash and frame are of genuine white pine, toxic treated and water repellent.

For free full-size details and for table of sizes on this projected wood sash, write the manufacturer.



NEW wood sash.



"SAVED on 1500 units, Renton, Wash.
— 37,500 lbs. of finish nails
—350,000 sq. ft. plywood
—320,000 BFM dimension lbr.
—18% in skilled field labor by use of glued-up prefab partitions."
W. C. MILLER, *Gen. Supt.*
J. C. Boespflug Const. Co.



ENDLESS LENGTHS OF PLYWOOD MADE POSSIBLE WITH LAUCKS CONSTRUCTION GLUES



"HOTBOX" METHOD OF CONSTRUCTION AT SPEEDWALL CO., SEATTLE



WOOD AND LAUCKS GLUE LAMINATED ARCHES FOR ARMY HANGAR

Modern "production-line" prefabrication actually produced walls by the mile for the 1500 Renton Highlands F. P. H. A. wartime homes.

The prefabricating sub-contractor, using LAUXITE RESIN GLUE and the "hot box" method of construction for affixing wallboard to studding, supplied partition wall to J. C. Boespflug Co., general contractors—speedily and economically.

Also supplied to this job were made-to-order sections of board for interior walls cut from endless lengths of plywood joined together with Laucks Glues.

Investigate how Laucks Construction Glues can save time, money and critical materials on *your* jobs—in laminated arches or beams, in prefabricated and all types of dri-built construction, in farm structures, etc.

For information, write Laucks, where 20 years' laboratory research and experience guarantee the right glue.

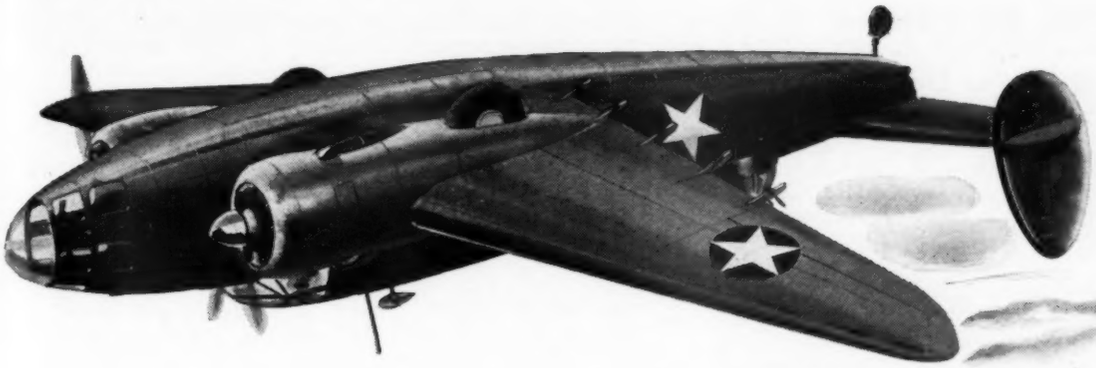
I. F. LAUCKS, Inc.

In U. S. Address Inquiries to—
SEATTLE—911 Western Ave. CHICAGO—6 N. Michigan Ave.
LOS ANGELES—859 E. 60th St.
Factories: Seattle, Los Angeles, Portsmouth, Va., Lockport, N.Y.
In Canada Address Inquiries to—
I. F. LAUCKS, LTD., Granville Island, VANCOUVER, B.C.
HERCULES-LAUX-MERRITT, LTD., STANBRIDGE, QUEBEC

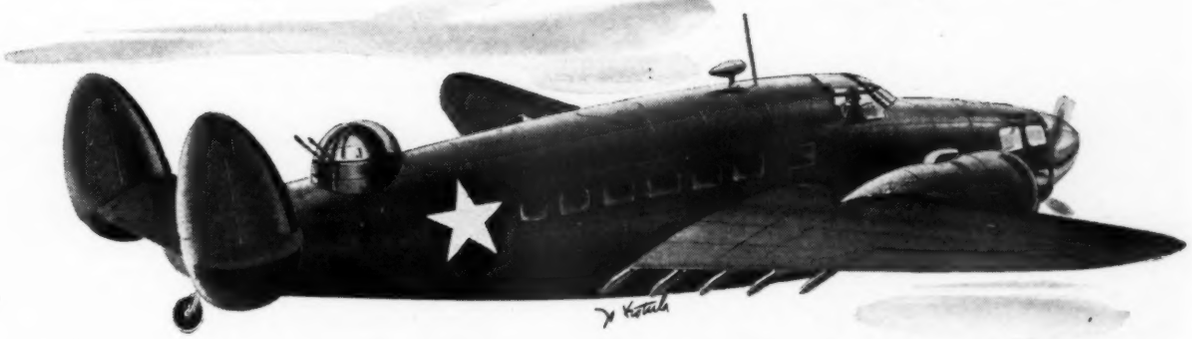
★ Don't forget, LAUX REZ, the pioneer resin sealer and primer, protects wood as rust-proofing protects metal.

WOOD & GLUE RELEASE STEEL FOR WAR

LAUCKS CONSTRUCTION GLUES
Consult LAUCKS—America's Glue Headquarters



Upside down or right side up . . .



at 20° below or 100° above

Without electricity, no modern bomber could ever leave the ground.

Electricity starts the motors, retracts the landing gear, changes the propeller pitch, works the wing flaps, opens the bomb doors, powers the radio and inter-communication system, operates the instruments, gives light for the crew.

No ordinary electrical apparatus can handle these jobs in a bomber. The whole complicated system must work as well upside down as right side up. It must function in a tropical thunderstorm and in 20° below zero altitudes. And it must be designed to save every precious fraction of an ounce and inch.



Developing electrical equipment for bombers—and producing that equipment in quantity—is a job that's made to order for Westinghouse "know how."

Here are some of the Westinghouse products that are going into American bombers today:

- **Instruments that are designed so one instrument does the work of two, without any increase in size or weight.**
- **Radio equipment and special blind-flying devices that enable a bomber to fly and navigate under the worst possible weather conditions.**



- **Electric motors that develop more horsepower per pound than any other motors ever built.**
- **Instrument lighting that casts invisible rays on dial markings. These rays make the dials glow so softly they don't hinder the pilot's vision as he glances back and forth from the instrument panel to the dark sky.**
- **Electric generators each of which weighs only 42 pounds, yet produces as much electricity as 35 standard automobile generators weighing 23 pounds each.**

In making these things, the long-range work of Westinghouse Research and Engineering Laboratories has played a significant part. Discoveries in many fields—in electronics, physics, chemistry, mechanical and electrical engineering—are now bearing fruit in the production of better and more powerful weapons of war.

Many of these discoveries, we believe, will someday help to make a better peacetime world.

★ ★ ★

This advertisement has been reviewed by Government authorities, and contains no information of military value to the enemy.

Westinghouse

PLANTS IN 25 CITIES—OFFICES EVERYWHERE

WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY, PITTSBURGH, PA.

LESS OF CRITICAL MATERIALS

(Continued from page 64)

All-Asbestos Ducts in War Dept. Building

A SAVING of over 2,000,000 lbs. of steel has been effected in the new War Department Building, now under construction in Arlington, Virginia, by utilizing an all-asbestos, insulated duct produced by The Philip Carey Mfg. Company, Cincinnati, according to W. L. Steffens, Vice-President of the Carey company. This product has been supplied for a number of other public and private construction jobs important to the nation's war effort, resulting in further conservation of large quantities of steel.



CAREYDUCT installation, new War Department office building.

The need of war industries for steel, Mr. Steffens stated, plus the vast quantities of metal duct which would have been required for what is believed to be the world's largest office building, found government officials receptive to the use of this product. According to the Carey official, the asbestos duct successfully met the rigid standards set by government engineers, and the large order followed.

This product, it is said, has an advantage in combining both duct and insulation; because it is constructed entirely of asbestos it is a natural sound absorber and non-conductor of sound. This permits effective hushing of fan and equipment noises and eliminates the "cracking" due to changes in air pressure or expansion strain, sometimes troublesome in metal duct systems.

Time and man-power are saved through factory fabrication of the ducts. Simple slip-joint construction permits telescoping of the sections, simplifies handling and eliminates shop work, as fittings can be readily made on the job. This affords quick, silent installation and is important where speed and quiet are essential, as many installations of Careyduct have been made in banks, hospitals and broadcasting stations without disturbing the occupants.

Non-Climbable Property-Protection Wood Fence

WOOD has been called upon to play innumerable new roles in the war effort not only because it is well suited for the jobs but to relieve the pressure on critical materials. Typical example is the non-climbable wood fence designed by the product development laboratory of General Timber Service, Inc., for Weyerhaeuser Sales Company, St. Paul, for the protection of ordnance plants, air fields, shipyards and industrial proper-

(Continued to page 68)

Rollins College
WINTER PARK, FLORIDA

The walls and ceilings of Strong Hall (illustrated here), the Students' Recreation Building and the Art Museum were made enduringly beautiful with the ***original*** Ohio White Finish.

Kiehnel & Elliott, Miami, were the architects;

H. C. Cone, Winter Park, the general contractor;

J. O. Youtsey, Orlando, plastering contractor.



For Your PROTECTION

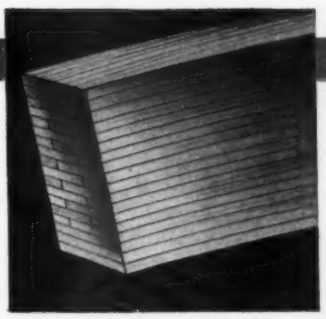
The ***original*** is always packed in bags distinctively marked with *Red Zig Zag* Stripes.

Thousands of our finest institutional buildings—hospitals, churches, schools, libraries, auditoriums, etc.,—have interior finishes made enduringly beautiful with ***original*** Ohio White Finish. That is because an ever increasing number of architects, plastering contractors and dealers know, from experience, that the high quality of this finishing line is ***dependable***—that it's always ***fresh,*** works ***cool,*** spreads ***far.***

THE OHIO HYDRATE & SUPPLY CO. **Woodville, Ohio**

Build the Job with TIMBER FRAMING

Now, Glued Lamination and Teco Connectors give you beams, arches and roof trusses of light weight and great strength for wide post-free spans!





Right now, contractors are proceeding with essential war-time construction by using wood trusses and structural framing members which are engineered for the job requirements, factory-fabricated, and delivered to the job site as complete units or knocked-down for fast assembly and ready erection.

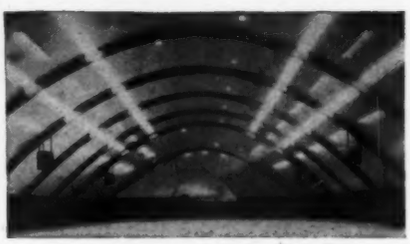
For large hangars and military chapels, for ship and airplane factories, for drill halls and warehouses, for almost any size and type of structure, lumber is being shaped, formed and joined to meet a wide range of specific structural needs.



Standard timber trusses for spans up to 100 feet and more are made possible by the Teco Connector System of wood construction.

Glued laminated structural members are available in a wide variety of sizes, types and shapes. Beam Arches for spans up to 200 feet or more—ply beams for flat roof structures of one and two stories, bowstring trusses, boomerang and utility arches, can be engineered, manufactured and delivered for the job you are now planning, regardless of its size or location.





It is easy to build with wood structural framing members. Complete data is available. Skilled fabricators are making standard timber trusses and glued laminated structural members to exacting specifications which meet Army, Navy and building code requirements—shipping to the job for ready erection. Their engineering staffs are ready to cooperate with you. Write today for information.

Copyright 1942, Weyerhaeuser Sales Co.



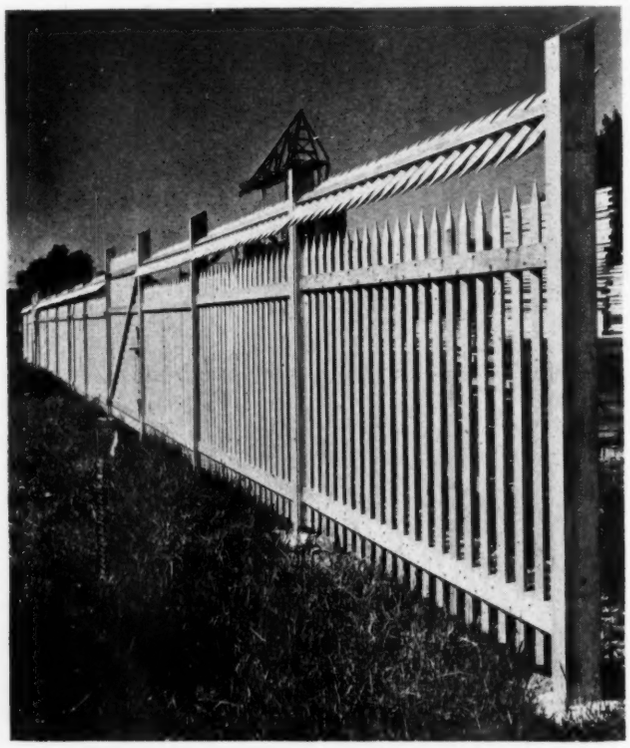
WEYERHAEUSER SALES CO.

First National Bank Building • Saint Paul, Minnesota

LESS OF CRITICAL MATERIALS

(Continued from page 66)

ties. It is made of durable Douglas fir in three heights—6, 7 and 8 feet—and is shipped knocked down in carload quantities only with all parts or members accurately machined for easy assembly. In each 10-foot section there are 21 pointed pickets 2" x 2" x 6' held between two 2" x 4" rails at top and bottom. Rails are notched to one-half the thickness of the pickets so that the two faces of the rails meet. Ends of rails are supported in notches which are cut into a pair of mortised strips, or cleats, that are fastened to the wide sides of the posts. This method of fabrication leaves the post intact and promotes economical, rapid erection. The 20" pickets on the guard rail are pointed at both ends and are set at a 45° angle.



NON-CLIMBABLE wood fence by Weyerhaeuser.

New Prefab-Plywood Partitions

MILWAUKEE Stamping Company, manufacturer of "Ferro-Metal" partitions for factory toilets, washrooms, dressing rooms, announces the development of new fir plywood panels as a successful substitute for critical metal on important factory installations.

The new Prefab-Plywood partitions are made in two types. Type P is the attractive flush style and uses metal only for the hardware—hinges, latches, handles and floor fittings. Type PS is the panel style with metal posts and headrail. On this type the plywood panels can be replaced with Ferro-Metal panels when these are again available.



PREFAB-Plywood panels for toilets.

(Continued to page 70)

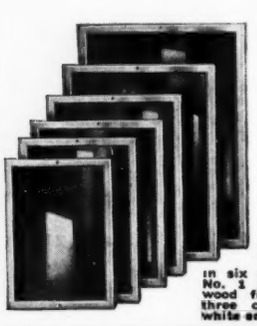
MIAMI Metal

BATHROOM CABINETS and ACCESSORIES

Available for Immediate Shipment WITHOUT Priorities

Limited stocks of the famous Miami Steel Bathroom Cabinets and Accessories are available, as long as they last, for repair jobs, replacements and new, essential housing. Further production of steel cabinets will be confined, for the duration, to the requirements of essential marine needs. Regardless of the cabinet requirements of your customers, you may sell MIAMI with every assurance that their reputation for fine craftsmanship and originality will be upheld; that MIAMI will continue to represent the most advanced ideas in the bathroom cabinet field. Write for complete stock list of all available numbers. Address Dept. AB.





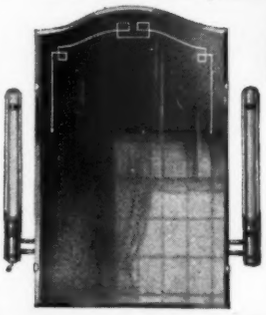
MIAMI MIRRORS in six sizes: Mirrors are No. 1 plate glass; hardwood frames finished in three coats of baked-on white enamel.

No. 405 An all-mirror front cabinet. Bevel edge mirror.



WOOD CABINETS AND WOOD FRAMED MIRRORS

These cabinets are complete in every detail—no hardware to buy; no painting to do; no shelves to make.



No. 660 All-mirror front Venetian type cabinet with tubular lights. The frameless mirror is held to the door with stainless steel mirror clips.

MIAMI CABINET DIVISION • THE PHILIP CAREY MFG. COMPANY

MIDDLETOWN, OHIO

Dependable Products Since 1873

After victory . . .
what kind of HOME will she want?



She's going to want Better Living *built-in.* For she and millions of other American women are learning that the *right tools* do the job easier, better, faster . . . and at less cost.

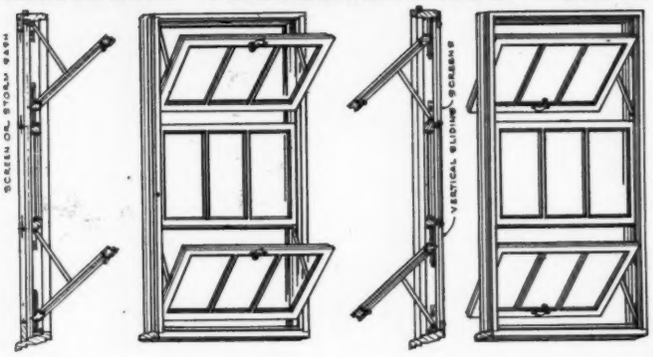
GENERAL ELECTRIC

HOME BUREAU • BRIDGEPORT, CONNECTICUT

HUTTIG
OF MUSCATINE
"WOODWORK OF MERIT"

INDUSTRIAL WOOD SASH

NATIONAL PROJECTED WOOD SASH



IN PROJECTING OUT PROJECTING

ROT-PROOF REZISTAL TREATED

This efficient
WOOD PRESERVATIVE
WATER REPELLENT
Insures protection and
Adds Years of Service

You get this added protection when you buy HUTTIG of Muscatine-National Projected Wood Sash Units—Huttig Rezistal treatment protects against wet weather and high humidity . . . Prevents excessive swelling . . . Eliminates undue shrinkage and expansion . . . Prevents blue stain or black mould from developing . . . Protects against all types of decay, also termites. Painting cost is reduced because the "Special" treat (See brand above) serves as a preliminary priming coat and gives full protection until regular paint coats are applied.

National projected wood sash, designed by Graham, Anderson, Probst and White consists of 18 standardized basic units. Each unit is a complete opening in itself and may be installed individually, or the various units may be combined both in height and width to meet requirements. The standardized frame is designed to accommodate either in-projecting or out-projecting vents, or both.



WRITE US TODAY

Book will be sent free to those advising quantity of units required and name of project in which same are to be used.

HUTTIG MFG. COMPANY
Muscatine Iowa

LESS OF CRITICAL MATERIALS

(Continued from page 68)

This new development in partitions of non-critical materials offers substantial advantages in wartime building projects. Supplied complete with all fittings, finished, if desired, in grey or white enamel, these partitions save valuable time in installation, and make important savings in cost. They avoid the need for designing and building up partitions on the job, for they are delivered all ready to be bolted into place quickly and easily.

Standardized models and mass production assure timed delivery of Prefab-Plywood partitions in any quantity, when and where needed. Further details and specifications may be obtained from the Milwaukee Stamping Company, 828-P South 72nd street, Milwaukee, Wisconsin.

New Asbestos-Faced Board Instead of Steel

SINCE WPB orders have drastically restricted the use of steel for many purposes, a new board of laminated construction, the product of a prominent research laboratory and said to be a valuable alternate for sheet metal, is receiving wide attention.

Tests are reported to have demonstrated that the product is rustproof, moisture-resistant and strong; that it meets fire tests of Federal Spec. 55-A-118 (Fire Retardant); has important advantages for many industrial applications such as air ducts (return or supply), joist liner, partition construction, shop and factory ceilings, clothes chutes, dumb waiter lining, elevator shaft protection, spray booths, attics and stairwells, reflector panels for indirect lighting.



WORKMAN applying Carey Asbestos heat duct.

The board is available, according to the manufacturer, in sheets 33 inches wide and 60 inches long, especially suitable for standard joist spacing of 16 inches.

This material, known as A-D Board, is a product of The Philip Carey Manufacturing Company, Lockland, Cincinnati, Ohio. Further information and samples of the board may be had by writing direct to the manufacturer.

House Boat Shelter

"AQUATIC" homes are now proposed to meet the housing shortage. This novel idea for circumventing the shortage comes from a Washington architect who has developed a cheap but attractive housing boat which would serve as a family dwelling. He believes that a flotilla of such homes would provide accommodations for large numbers of people at a minimum cost. He has coined the phrase "Aqua-homes" to be used in connection with his proposed projects. Whatever other merits his rather ingenious plan may possess, he is certainly correct in one point that he stresses, which is that no digging will be necessary for the foundations.—From "Headlines" (NAREB).

OFFSET THE 50° SLOW UP* IN FALL CONCRETE BY USING SOLVAY CALCIUM CHLORIDE

***Do you realize how seriously temperatures of 50° or lower slow the development of strength of Portland cement mixes?**

The addition of Solvay Calcium Chloride to the mix, by doubling the strength normally developed during the early periods, serves to overcome the slowing effects of lowering temperatures. This means:

1. **Quicker finishing.**
2. **Quicker use of the finished concrete.**
3. **Doubles output of forms.**
4. **Makes stronger, denser, more waterproof concrete.**
5. **Does not change normal chemical action of Portland cements.**

use **SOLVAY CALCIUM CHLORIDE** *with all* **PORTLAND CEMENTS**

Write for booklet giving complete details on the use of Solvay Calcium Chloride with Portland cements. Write to Dept. 3410, Solvay Sales Corporation, 40 Rector Street, New York, N.Y.

For Approved, Low Cost, War Time

FIRE PROTECTION

QUICK EASY WAY
TO END SLIPPERY ICE

. . . on sidewalks, steps, streets, loading platforms, spread clean white flakes of Solvay Calcium Chloride. Loosens ice quickly. Can be swept or shoveled away without chopping. Solvay Calcium Chloride can also be mixed with sand or cinders for skidproofing.

SOLVAY CALCIUM CHLORIDE

Use PAILS, BARRELS, PUMPS and SOLVAY CALCIUM CHLORIDE

WON'T FREEZE · EVAPORATE · DETERIORATE

WON'T FOUL · EASY TO PREPARE · NO MAINTENANCE

● **LOW COST—The cost of Solvay Calcium Chloride solutions ranges from 3c to 8c per gallon. This means that complete units consisting of pails and solution can be obtained for one dollar or less.**

Fire Department, City and O.C.D. officials send for complete information. Write to Dept. 3410, SOLVAY SALES CORPORATION, 40 Rector Street, New York, N.Y.

HEAVY TIMBER CONSTRUCTION

comes back in a big way!

Leading Financial Publication Spotlights Revival

"Wooden industrial plants can be built strong enough for almost any use.

"One of the biggest such jobs is an ordnance plant . . . all trusses are of wood. Another will have wooden trusses, each 72 feet long. Each truss has more than 100 pieces of lumber fastened by bolts and connector rings to give it the corresponding strength of steel.

"Sag in wooden trusses will be scarcely noticeable. The builder estimates a 50 per cent saving in time by using wood.

"The hangar is one of the largest ever built. Its framework alone consists of thirteen 150-feet wooden arches.

"The radio plant contains 198 wooden girders cut at the job in assembly line fashion.

"Life-span and durability of modern wood construction compares favorably with steel—many old multi-story type factories are still standing today.

"Fire hazards of wooden construction have been minimized by treating lumber with fire-resisting paints. Even untreated wooden trusses are relatively safe.

"Wartime come-back of wood is developing in the eastern industrial area."

WALL STREET JOURNAL, New York

HEAVY timber construction is solving the material problem posed by lack of structural steel; is a sound, economical method on its own record; *is charting the way to vastly increased use of wood in the postwar period ahead.*

The vast volume of Arkansas Soft Pine going into these heavy construction projects is the best reason for your own investigation of its merits. *Technical data, specifications and complete information are yours for the asking. Address:*

ARKANSAS SOFT PINE BUREAU
1024 BOYLE BUILDING
LITTLE ROCK, ARKANSAS

TRENDS in Equipment and Building Materials

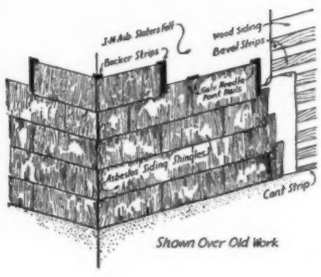
No Face Nails on New J-M Shingles

THE new No. 205-U Johns-Manville asbestos siding shingle, with wavy butt line and of uniform thickness, has 3 head-nail holes and no face-nail holes.

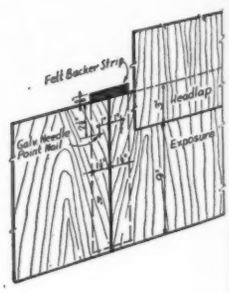
The size of the full shingle is 12" x 24". They are laid with 3" head lap and no side lap, and 66 shingles per square, packed in 3 bundles, are required. Some bundles contain 22 full-size shingles and others 21 full-size and 2 half-size shingles. The half-size shingles are for use at the corners and they save the time of cutting a full-size shingle and re-punching.

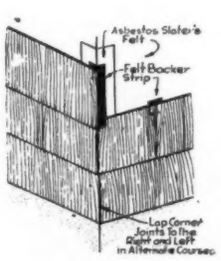
Joints are protected by the use of 3" x 12" felt backer strips, furnished with each square of shingles. Backer strips of "Salamander" white top asbestos roofing are also available at slight additional cost. When re-siding, 1½ lb. of 2" galvanized needle-point nails per square are required; over new work, 1 lb. of 1¼" nails. Where exposed or face-nailing of shingles becomes necessary, such as at building corners, use only the special face nails available for this purpose. Nails are not furnished with the shingles. No starters are required.



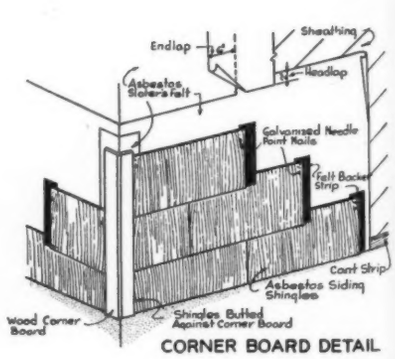


Shown Over Old Work





BUTT CORNER DETAIL



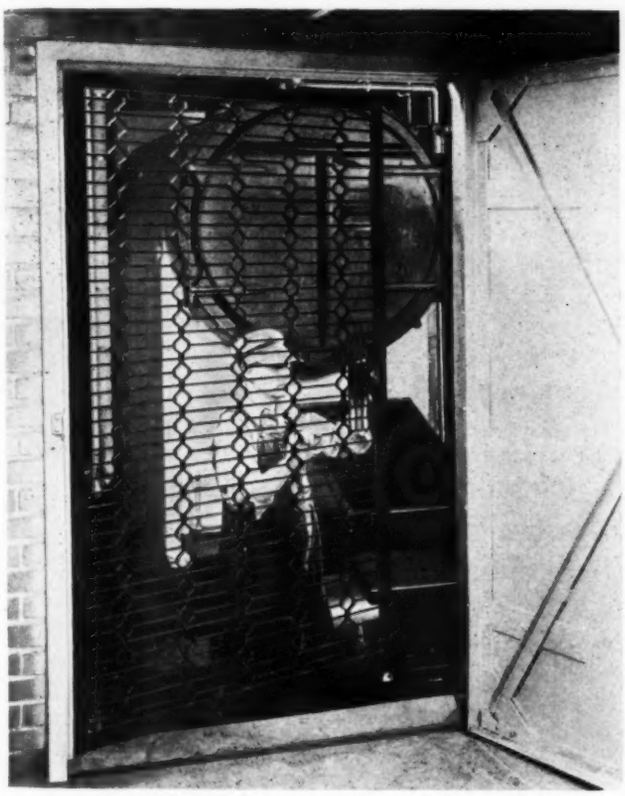
CORNER BOARD DETAIL

NEW J-M asbestos shingles and how laid without face nailing.

New Protective Grille for Doorways

WITH TODAY'S increased demand for protection of doorways, the announcement by The Kinnear Mfg. Co., Columbus, Ohio, of a new swinging type grille strikes a particularly timely note. It offers an economical device for barricading doorways without obstructing air, light or vision. Patterned after the rolling grille, which the company has been manufacturing for large size openings for a number of years, it provides an exceptionally strong grille. The grille proper is assembled in a heavy steel frame and equipped with steel encased cylinder lock. The grille is permanently installed by massive side hinges. Though not of prison design, it offers a high degree of comparable barricading strength.

The assembly of steel links and 5/16" steel rounds affords neat appearance as well as strength. Apertures are small enough to prevent admittance of a man's hand and yet large enough to allow maximum passage of air and light and permit vision the full extent of the opening. The manufacturer states that every detail has been constructed to provide a guard that says "stay out" in no uncertain terms—a sentinel which requires no wages, never lays off, and which will stay on the job for years.



METAL grille closes doorway.

Conversion Packages Aid in Change From Oil to Coal

"CONVERSION PACKAGES" are offered by boiler manufacturers as a convenience to home owners who wish to convert their oil-fired hot water or steam heating plants to coal-firing, says the Plumbing and Heating Industries Bureau.

The "conversion package" contains not only the grates but the grate bars, shaker handles, and all the other equipment necessary for complete conversion. The price of the package is substantially less than the total price of all of the individual items if purchased separately.

In an effort to cooperate with home owners, dealers, and with the government, many boiler manufacturers have made comprehensive surveys of the conversion requirements of the boilers which they have sold over a period of years. Due to the fact that cast iron boilers will last for 50 years or more, if given the proper care, manufacturers have had to take into consideration the equipment they have made for the last half century.

It is expected that most of the demand for grates will come

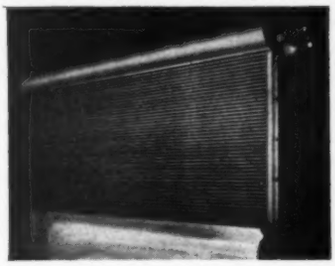
(Continued to page 74)



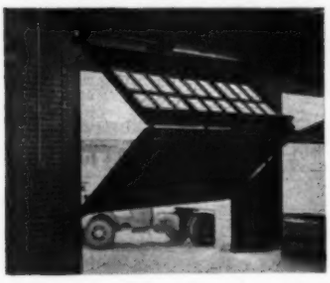
YOU CAN STILL HAVE KINNEAR DOOR EFFICIENCY

Even though you now find priorities and shortages taking an active hand in your job-planning, you can still build Kinnear Door efficiency into every garage or service opening. Kinnear, originator of the interlocking-slat door, offers you doors of many types . . . wood or all-metal with motor, mechanical or manual control . . . all featuring smooth, space-saving upward action! Every Kinnear Door is built to individual specifications, ready for economical installation. For full data on the complete line write for your copy of the new catalog today.

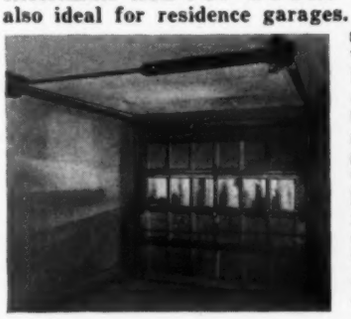
KINNEAR ROLLING DOORS A durable, protective door of highest efficiency. The interlocking-slat curtain travels in metal grooves in the jambs and coils on a barrel above the lintel. A helical spring encased in the barrel provides an effective counterbalance. Slats can be replaced singly or in sections. Available in any size for face-of-wall or between-jambs installation.



KINNEAR BIFOLD DOORS A rugged, heavy-duty door with provision for light. The model illustrated is a rugged, quick-acting door of two sections hinged horizontally and pivoted from brackets at the upper corners. Torsion-spring counterbalance assures smooth, easy operation. All sizes; wood or all-metal. Motor control available. Heavier-duty "Telescoping" Bifold doors also available.

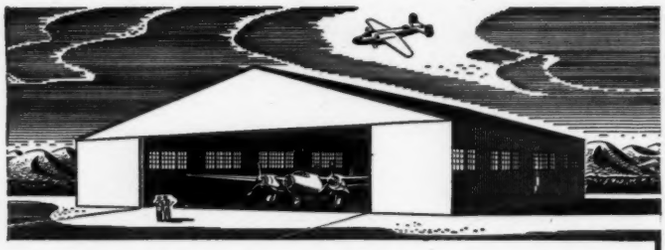


KINNEAR RoL-TOP DOORS An all-purpose door; also ideal for residence garages. Composed of several sections and equipped with special ball bearing rollers that operate in rugged steel tracks. Counterbalanced by one or more springs and furnished with rugged cylinder lock and special sealing device. Sections can be of any design, wood or metal. Motor operation and remote control are available.



THE KINNEAR MFG. CO., 1560-80 Fields Ave., Columbus, Ohio

SAVING WAYS IN DOORWAYS **KINNEAR** ROLLING DOORS



Wartime Structures Use Wood, Profiting by Past Performance

WOOD STRUCTURES go up easily and fast, speeding construction that is vital to our war effort. Wood combines its own high insulating value with structural strength. Its use releases scarce materials for combat equipment.

WOLMANIZED LUMBER* adds permanence —ability to resist decay and termite attack —assuring long postwar life for wartime structures. It adds little to first cost, is light, strong and resilient. Upkeep costs will be low in years to come, making money ordinarily needed for maintenance available for other purposes.

DECISIONS TO USE Wolmanized Lumber for these wartime structures are based on service records covering the past sixteen years. They prove that this vacuum-pressure impregnated wood is able to stand up on the tough jobs.

POSTWAR PLANNING wisely includes the use of Wolmanized Lumber as a barrier against decay and termite attack. We'll gladly send you data on where and how it is being successfully used. Write American Lumber & Treating Company, 1645 McCormick Bldg., Chicago, Illinois.

*Registered Trade Mark

WOLMANIZED LUMBER

TRENDS IN EQUIPMENT

(Continued from page 73)

from the owners of the older boilers which have been adapted for oil firing. It is this type of boiler, too, which can be most easily converted back to coal firing.

A recent survey of typical installations in eastern states indicates that about 50 per cent of existing boilers and furnaces can be easily converted. In some cases, home owners still have the grates stored in their basements.

The 50 per cent of installations for which conversion would be difficult or impractical includes 20 per cent of boiler-burner units; 10 per cent of enclosed heating units; and 17 per cent which involve a control problem. There is an estimated 3 per cent of dwellings occupied by invalids or aged for whom manual firing would involve great hardship.

While boiler manufacturers are offering packages for quick conversion, manufacturers of controls are offering packages which enable home owners to enjoy automatic control of temperature with manual firing. A motor opens or closes the draft in accordance with the demands of the thermostat.

A survey of boiler manufacturers by The Institute of Boiler and Radiator Manufacturers indicates that the inventory of grates in the warehouses of manufacturers and their branches and distributors is considerably larger than normal. Manufacturers plan to maintain a good stock of grates and conversion parts.

It is emphasized, however, both by the manufacturers and by the government that only wholehearted cooperation on the part of the public will insure the success of the conversion program. Home owners, particularly those with boilers originally made for firing with coal, are urged to call a heating and piping contractor immediately for an estimate on conversion. At the same time, it is suggested that home owners look around in the basement to see if grates, base doors, and shaker handles may be on the premises. Home owners who are planning to convert should also place an order for enough coal to last them throughout the winter and take steps to build or convert storage space for coal.

No priority rating is required for the purchase of grates or other equipment necessary for conversion.

Domestic Bristle Industry Launched

THE ESTABLISHMENT of a new industry in the United States was revealed recently in the announcement by E. S. Phillips, president of Devoe & Raynolds Company, Inc., paint and brush manufacturers, that his company is now dressing domestic hog bristle for use in making brushes.

Heretofore, all hog bristle used in the manufacture of brushes in this country was imported from the Far East, particularly China and Siberia. In 1941 approximately 6,000,000 pounds of dressed bristles were imported. Now, due to the conflict in the Pacific, imports of this vital raw material have been cut off, with the result that the national stockpile of bristle has been greatly depleted.

Progress made in the use of domestic hog bristle for brushes follows many months of research, experimentation and cooperative work between large packers and Devoe & Raynolds, Mr. Phillips points out. The company is cooperating with the Department of Agriculture in its effort to gather hog bristle through county collection agents, officials of 4-H Clubs and others who can assist in this work.

"The inauguration of the domestic bristle industry," says Mr. Phillips, "ties in closely with the bristle reclamation program which was sponsored by Devoe & Raynolds Company in June of this year as a step in the salvaging of critical raw materials for war purposes. Many thousands of pounds of old paint-hardened brushes have been purchased by Devoe & Raynolds at prices ranging from ten cents to two dollars and turned in to Bristle Reclamation Plant at Louisville, Ky., for processing to reclaim bristle content which, in turn, has been used in making more brushes.

"We expect that the sum total of bristle secured as a result of dressing domestic bristle and reclamation from old brushes will contribute substantial quantities to the material required for paint brushes in connection with the national war effort."

Sherwin-Williams Reclaims Drums

THOUSANDS of steel drums and barrels which would be junked in normal times are being reclaimed under a new reconditioning plan developed by the Chicago plant of the Sherwin-Williams Company. The drums are used for bulk shipments of camouflage paints for ships, tanks and other



STEEL DRUMS come back from finish users rusty and dented and are stacked in the Chicago Sherwin-Williams yard awaiting reconditioning.

ordnance finishes supplied by the company to war plants throughout the country.

Forced into the reclamation project by shortages of steel, the Sherwin-Williams Company reclaims rusty and gummy drums again and again by an ingenious chemical treatment. The process is far more costly than using new drums, but many tons of metal are thus saved for war equipment.

Skilsaw Introduces 2 New Portable Grinders

TWO NEW portable grinders have just been added to the extensive line of electric tools manufactured by Skilsaw, Inc., Chicago. They are Model "AD" and Model "AE," 4 in. and 5 in. grinders respectively; and both are purposely introduced right at the peak of America's greatest production drive because both are especially engineered to meet today's high speed requirements on all grinding, wire brushing, polishing and buffing operations.



NEW Skilsaw grinders

Both the 4 in. Portable Grinder, Model "AD" and the 5 in. Portable Grinder, Model "AE" contain every feature of advanced design and sturdy construction essential to maximum performance and adaptability to a wide variety of applications. Ball bearings mounted in steel inserts on armature and extreme ends of wheel spindle absorb thrust, eliminate vibration and insure cool operation. Commutator and switch are fully enclosed for protection against dust, and straight-line ventilation blows dirt away from operator, prevents clogging. Finest steel gears, heat-treated for long life and spline-mounted on shafts, are both strong and quiet. Powerful universal motor assures full efficiency under load. Rubber sleeve handle provides a firm, cool, non-slip grip.





No sir, a chimpanzee could not install a Grand Rapids Invisible Sash Balance. And any man who installs a set needs more sense than a chimp.

On the other hand, neither must he be a master carpenter. The simplicity of the installation makes the entire operation easy and understandable.

But that is only the beginning. The real test of satisfaction comes with the smooth dependable performance (regardless of relative humidity), ease of tension adjustment, absence of tapes or cables, and the invisibility of the working mechanism.

Scores of contractors have found that the "Invisible" installation saves time and cost and (get this) saves on critical materials. True of double as well as single balance installations. In fact, the Grand Rapids Invisible Sash Balance is endorsed for Federal Housing Projects.

Our raw materials and your deliveries are governed by priorities, as with other essentials, so please furnish proper priority information with order to assist us in replacing the materials used in filling your requirements.

Send for our catalog No. 42-SB-2 for full information on Grand Rapids Invisible Sash Balances.

GRAND RAPIDS HARDWARE CO.
Grand Rapids, Mich.

"GRAND RAPIDS"
Sash Balancing Equipment
THE STANDARD FOR FORTY YEARS



Photo by Robert Whiteside,
Staff Photographer, Tulare Daily Times

200 buildings COMPLETED in 2 weeks . . .

War construction speeded by fast delivery of interior Weldwood from warehouse stocks

When the Army ordered evacuation of Japanese from the Pacific Coast, the government had to build big induction centers fast. The one above was rushed through in a matter of *fourteen days!*

Because large Weldwood panels are easily handled and quickly installed, they speed construction. In this case, further saving of time resulted from *fast delivery* . . . all of the interior plywood needed for the job being furnished from warehouse stocks.

Weldwood Utility and De Luxe Paneling for interior use are made in stock size panels up to 4 x 8 ft. Both types are exceptionally strong, durable and split-proof. The Utility Panel (faced with unselected gum) takes a paint, paper or natural finish. Weldwood De Luxe Paneling in oak, walnut or mahogany, makes possible fine interiors at low cost.

For *strong* construction in record time, use Weldwood. Ask your lumber dealer for quotation. For full information and large, illustrated Weldwood catalog write to nearest branch of U. S. Plywood Corporation, or to main office in New York.

NEW PLASTIC GLUE

Weldwood Plastic Resin Waterproof Glue . . . makes strong, permanent joints. Readily mixed with cold water. Available in convenient sizes, 1⅛ oz. cans up to 100 lb. drums. Literature, FREE sample on request.

UNITED STATES PLYWOOD CORPORATION, New York, N.Y.

World's Largest Producer of Plywood • Service branches in all principal cities

WELDWOOD REG. TRADE MARK — UTILITY AND DE LUXE PANELING

Weldwood, the name formerly applied to Waterproof Weldwood only, now is the family name of all plywood products made by United States Plywood Corporation.

PRACTICAL JOB POINTERS AND BUILDING DATA

Take Care of Your Rope, Here's How

ONE OF THE EFFECTS of the war in the Pacific was the cutting off, some months ago, of supplies of Manila fiber from the Philippines, reports the current issue of the "Dutch Boy Painter." It thus became necessary for the government to divert all existing stocks of Manila fiber to the production of rope for war needs, leaving civilian requirements to be met by rope made from other materials. That this situation is bound to affect painters and other building mechanics whose work calls for swing stages and rigging goes without saying.

Since all rope must be conserved for the duration, at least, it becomes a patriotic duty for all users who depend upon rope in the execution of their jobs to use what rope they have, or may contemplate purchasing, to the best possible advantage and to make it last as long as possible.

Even a moderate strain on a rope in which there is a kink may overstress the fibers at the point of the bend. Thus every precaution should be taken to avoid kinking. Kinking is most likely to occur when a rope is wet, due to shrinkage of the rope which is caused by the swelling of the fibers and consequent shortening of the lay. To avoid kinks in new rope while uncoiling, lay the coil on the floor with the inside end down; then reach down through the center of the coil and pull this end up and unwind the coil counter clockwise. If it uncoils in the wrong direction, turn the coil over and pull the end out on the other side.

Ropes should not be stored in a dirty condition. To clean a rope it should be hung in loops over a beam or bar placed at a convenient height. The sand or mud should then be removed with a garden hose, care being taken that the pressure of the stream of water is not so great as to force the dirt further into the rope. After washing, the rope should be allowed to dry and then lightly rapped or shaken thoroughly to remove any remaining dirt. The rope should be stored in a dry place where it will not be exposed to high temperature and where air may circulate through the loops or coils.

Ropes are sometimes thrown down in a corner of a shop or storeroom and covered with other material so that the air cannot circulate properly through the coils. With such treatment, rope cannot be expected to retain its proper condition. Small ropes should be hung up, and large ropes coiled on gratings raised from the floor. Alternate wetting and drying causes quicker deterioration than when a rope is always wet.

Ropes should never be stored in a damp place, as a form of rotting may result. On the other hand, rope may be injured seriously by becoming too dry, because the fibers then become brittle and lose much of their strength. Rope should not be allowed to freeze after it is wet, as frozen rope breaks easily. Rope should not be piled near radiators, steampipes or stoves.

Sharp bends over unyielding surfaces should be avoided because they cause extreme tension on the fibers. Care should be exercised in making a rope fast to select, if possible, an object with a round, smooth surface of sufficient diameter. If the object has sharp corners, pads of burlap or bagging should be placed over the sharp edges.

Rope should never be dragged along the ground; to do so rubs off some of its substance and it picks up sand and grit which may work into the interior of the rope, cutting the fibers.

Surface wear of the rope occurs when the sheave holes in the blocks are to small to permit sufficient clearance, and when the rope is out of proper alignment, thus causing it to chafe against the block. Internal wear, or friction, of the fibers is always present when the rope is running over a sheave or pulley. The smaller the diameter of the pulley, the greater the friction. Eventually, chafing on the outside and the internal friction break up the fibers. The life of a rope is greatly

prolonged by using blocks with sheaves of large diameter—Manila rope of 1" diameter requires a block with a 9" long shell.

During rope manufacture the fibers are treated with oil to preserve them and to lubricate the internal fibers. The lubricant constitutes from 8 per cent to 12 per cent of the weight of the rope. Do not attempt to lubricate your rope—good rope is adequately lubricated during its manufacture.

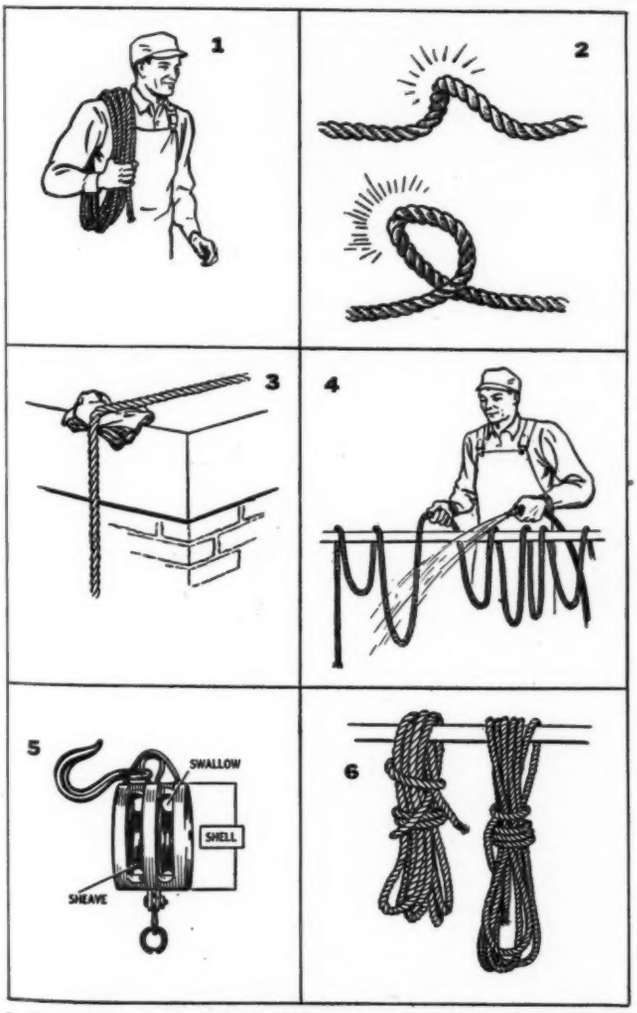
Many chemicals are injurious to rope fibers. Rope should never be stored close to acids or alkalis, nor left in contact with chemicals or fumes. Acids used in the washing of buildings and acids used in storage batteries are especially injurious. Do not allow drying oil, such as linseed, or any paint, to get on your ropes.

The main causes of rope deterioration, aside from exposure to damage by fire and acids, are excess loading, external abrasion and internal wear. External wear is most easily detected. When the surface threads of a rope have worn about halfway through, the rope may have to be discarded as unsafe to use.

Internal wear, due to excess bending and tension, is revealed by the presence of a white, powdery residue of the inside yarns. By unwinding one yarn from the strand the extent of this damage may be detected. Under most working conditions internal wear, unless extensive, is not a serious factor.

The most serious abuse is excess loading. Any load beyond 75 per cent of the rope's breaking strength will cause permanent injury. This type of damage may be detected by examination of the inside yarns which will be wholly or partially broken, depending on the amount of the overload.

If rope is given periodic inspections for accidental cuts and abrasions, and a reasonable factor of safety is used for determining the load (about 5 for most conditions), it will give long and dependable service.



1. Carry rope—don't drag it; 2, keep free from kinks; 3, pad sharp corners; 4, clean off mud; 5, use blocks of proper size; 6, coil and hang for storage.

For the Essential Building of Today



. . . and the Better Structures of Tomorrow

• Knapp Metal Casings are finding broad use in the essential construction program of today. With carefully planned application they help achieve rapid erection and over-all economy—in addition to the advantages of ruggedness and simplicity.

In the building plans of tomorrow too, Knapp Casings will play an important part. They will contribute much to the durability, beauty and practical design that will be featured in the better structures of the coming building era.

Our present activities, of course, are restricted to supplying products for essential construction permitted under the conservation program.

KNAPP METAL TRIM
KNAPP BROS · MANUFACTURING CO.
GENERAL OFFICES · JOLIET, ILLINOIS



conserving steel, saving transportation, expediting war jobs



On many types of war construction, concrete is helping meet three pressing requirements:

STEEL IS CONSERVED. Concrete provides rigid, durable, fire resistant construction with minimum use of steel. Many structures, such as floors on ground, need none. Portland cement water paints save lead and zinc.

TRANSPORTATION SAVED. Concrete imposes a minimum burden on transportation facilities, since the bulk of the material is usually found locally.

TIME SAVED. Simple methods, widely available concrete workers and local materials are helping to expedite jobs.

Our technical staff is available to assist designers and builders of large-scale housing or other major war construction jobs. Do not hesitate to call on us for concrete data that will help expedite work, reduce reinforcing steel or solve other war concrete problems.

PORTLAND CEMENT ASSOCIATION
Dept. 10-3, 33 W. Grand Ave., Chicago, Ill.

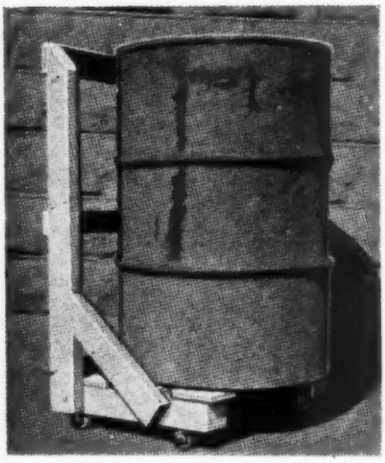
PRACTICAL JOB POINTERS

(Continued from page 77)

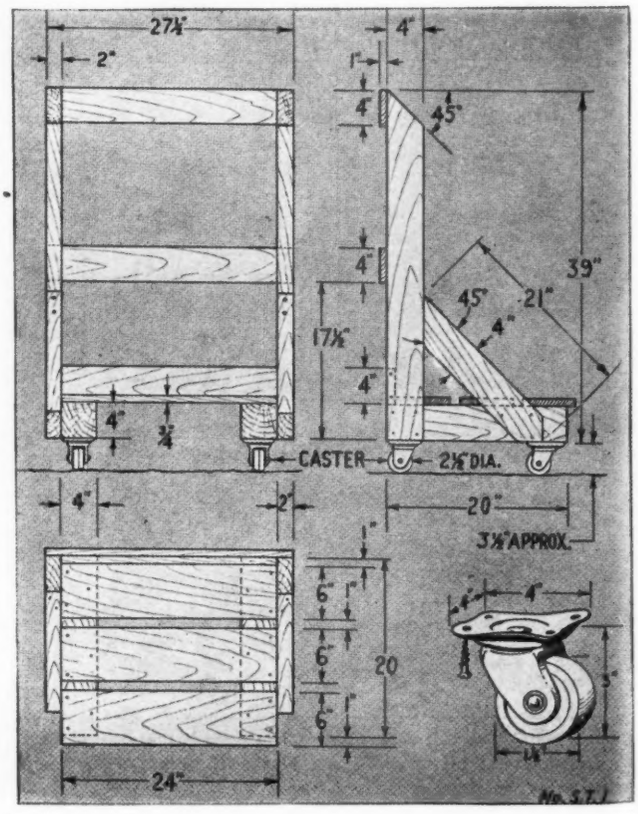
How to Make Trash Barrel Dolly

THE trash barrel dolly, as seen in this picture, contributed by T. P. Douglass, Topeka Branch of the International Harvester Co., and published in the "Harvester World," is very essential to every dealer's service station as it offers a ready place to throw old and worn-out parts, thus forestalling a collection under the work benches that detracts from shop appearance and efficiency. This dolly is mounted on four casters (see drawing) and is readily moved about the shop. The barrel itself, a 55-gallon oil drum with one end removed, is loose on the dolly and can be removed for emptying.

Variations: Handles could be made on the barrel to facilitate emptying of barrel. The top cross member on the dolly could be mounted in a flat position with holes bored in it in which to keep brooms and shovels, etc., that are used to clean the floor. The barrel and dolly could be painted a neat color with the words "Trash Barrel" printed on the barrel itself.



LEFT, trash can on dolly and, below, working drawings of dolly.



New Extension Brush Handle Boosts Efficiency

ADJUST-O-HANDLE, the new adjustable extension handle for use with paint brushes, scrapers and similar handled tools, is designed to make painting, scraping and many other jobs easier. It permits efficient coverage of larger work surfaces from a fixed position. Its use is said to effect greater speed and efficiency on shipbuilding, housing, industrial plant, camouflage, blackout and other wartime painting jobs.



BREINIG'S labor-saving extension handle for brush work.

The new device is simple to master and easy to operate. Regular accepted brushing technique is employed. By easy manipulation of springs and guide tape, any size standard brush (or tool) can be operated smoothly and efficiently as when held in the hand. Working pressure at the point of contact is equalized because the brush (or tool) can be adjusted to any angle desired by two-finger control of the tape.

The Adjust-O-Handle's flexible spring action saves hand and arm shock, and the workman's strength is otherwise conserved because use of the device requires only normal arm and shoulder movement with both feet solidly planted in a balanced standing position. Floors and roofs can be treated without stooping or kneeling, ceilings without stretching and straining, and hard-to-get-at surfaces without other body contortions.

The Adjust-O-Handle is available in standard lengths of 6, 8 and 10 feet; special lengths to order. Illustrated circular and prices may be obtained from distributors or by writing direct to Adjust-O-Handle Division, Breinig Brothers, Inc., Hoboken, N.J.

Conversion from Oil to Anthracite

Q. What do I do if I want to convert from oil to anthracite?

A. Call in your local plumbing or heating contractor, or ask a coal dealer to recommend a contractor.

If you formerly burned coal and the grates are in the cellar, he will advise you the cost of removing the oil burner and installing the grates. In practically every case, this will be a very small item of expense.

If the old grates were not retained, he will take the name of the manufacturer and serial number of the boiler or furnace and order the grates and other parts.

Q. Can the manufacturer ship the grates promptly?

A. Immediate shipment can be made if ordered now. All boiler and furnace manufacturers report large inventories of grates.

Q. If my contractor advises me that the supports that hold up the grates were knocked off when the oil burner was installed, what can I do to convert?

A. If ordered immediately, your coal dealer or heating contractor can secure special grates and supports.

Q. Can I secure grates if I wait until cold weather to convert?

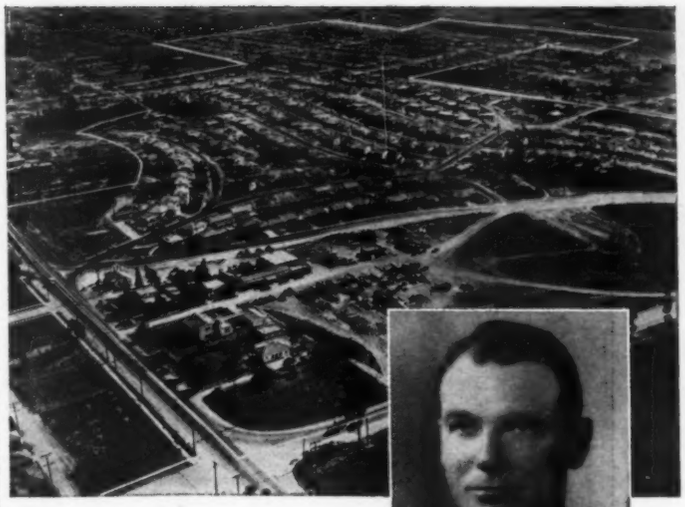
A. There will be no assurance that you can secure immediate shipment of grates during the winter.

Metal priorities have been approved by the War Production Board, but if everyone waits, there will not be sufficient production facilities or labor available to make the installations.

Q. Can special oil burner furnace units be converted?

A. Your heating and plumbing contractor can determine whether the conversion can be made. Many boilers and furnaces

(Continued to page 80)



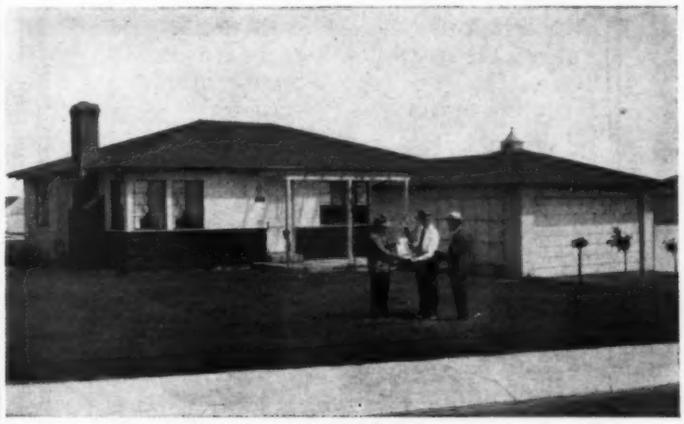
Fritz Burns

KNOWS HIS ROOFS

"Certigrade shingles have been our standard and exclusive roof covering for not only our present Westchester development (2,000 defense homes), but also our Westside Village Tract (788 homes), our Toluca Wood residential district (394 homes), and our building operations in Windsor Hills (a completed development of over 1,500 home sites). It is my opinion that for good looks, economy of application, varied uses and permanency, Certigrade Red Cedar shingles are "tops".

Very truly yours,
HOMES AT WHOLESALE, INC.

By FRITZ B. BURNS"



FREE BLUEPRINTS—We will gladly send you free a complete set of blueprints covering all types of red cedar shingle roof and sidewall application. Address:

RED CEDAR SHINGLE BUREAU
5508 White Bldg., Seattle, Wash., Canadian Office: Vancouver, B. C.

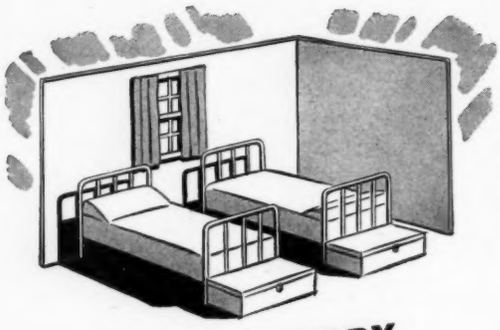


Red Cedar **SHINGLES**

BUY U. S. WAR BONDS

FOR WAR-TIME CONSTRUCTION

...THESE PLASTIC-COATED WALL-BOARDS



THEY GO UP IN A HURRY, LAST LONG, AND COST LESS!

WAR construction calls for low cost, speed, durability. Barclay Plastic-Coated Panels offer just that! They're prefabricated from treated hardboard, coated with a plastic that won't chip, crack or peel. They're easy to clean. Need no renovating.

The Barclay Panel has a highly polished, mirror-like finish; while Chevron Board has a rich, velvety texture. Twelve colors, two finishes, three patterns.

Both types of Barclay Plastic Coated Panels come in large sizes . . . are quick and easy to install, *even by semi-skilled labor.*

We want you to test a sample. Mail coupon today!

Save time! Save money! Use Barclay panels for both walls and ceilings in...

WAR HOUSING	FACTORIES
CONVERSIONS	CANTEENS
NEW CONSTRUCTION	LABORATORIES
BARRACKS	SECTION UNITS
SHOWER STALLS	HOSPITALS
KITCHENS	DORMITORIES
BATHS	LIBERTY SHIPS

TRUCKS AND AMBULANCES

PROMPT DELIVERIES!

Barclay products are available. All orders — large or small — are being delivered promptly!

BARCLAY PLASTIC-COATED PANELS

Barclay Manufacturing Company, Inc., Dept. AB-10, Bronx, N. Y.
Please send me free samples of Barclay Plastic-Coated Panels and literature.

Name.....

Address.....

City.....State.....

PRACTICAL JOB POINTERS

(Continued from page 79)

were furnished for use with oil but provision was made for grates. Eighty-five per cent of the total oil burner installations can be converted to coal.

Q. Can automatic thermostatic control be used with coal?

A. Yes. Thermostats and damper motors can be obtained from a coal dealer or heating and plumbing contractor, if ordered now. In some cases your present oil burner thermostat can be used with the addition of a damper motor.

Q. Can I have completely automatic heat with coal?

A. Yes. Some dealers have limited stock of stokers available that can be obtained, if ordered immediately. Production of stokers was discontinued as of June 1, 1942.

Q. If I convert, what assurance is there that I can obtain coal?

A. An adequate supply of anthracite will be available before it is needed for heating purposes for oil burner customers who decide now to convert to anthracite. The delay in filling some consumer orders during the past few weeks has been due to the "buy now" coal campaign sponsored by the Government. These unprecedented shipments have moved to consumers' bins during the summer months a large part of the fuel usually purchased during the fall and early winter months.

Q. My bin was torn down when I installed oil. How much space is required to store a ton of coal?

A. Approximately 37 cubic feet for each ton of anthracite. In estimating storage for a season's requirements for anthracite, figure one ton of coal for each 200 gallons of oil consumed last year. Inasmuch as last year was 10% warmer than an average year, add 10% additional space to your estimate.

Q. How do I find out the cost of converting?

A. From your plumbing or heating contractor.

Q. Can the cost of conversion and purchase of coal be financed?

A. Yes. Through finance companies, or the FHA Plan is available through many banks to finance the cost of conversion on a three-year payment plan basis, and a year's supply of coal can be financed over a one-year period.

Q. If I convert, what size anthracite should I use?

A. Stove, Egg, Chestnut or Pea, depending upon type and size of your furnace. Your coal dealer will advise you as to the proper size for your home.

Q. I have seen devices advertised to burn the small sizes of coal by using the oil burner blower for forced draft. Does the Anthracite Industry recommend this type of equipment?

A. No. On all equipment of this type tested to date, the grate area has been reduced to such a point that satisfactory heating results cannot be obtained. Furthermore, sufficient room is not allowed for ash accumulation and removal. Before purchasing specialized equipment to burn anthracite, home owners should make sure it has been approved by the Anthracite Industries Laboratory.

Q. Will conservation methods, such as: turning back my thermostat; increasing the efficiency of my heating equipment; installing weather stripping, storm-windows and insulation, reduce my fuel requirements sufficiently to insure healthful heat?

A. Weather conditions and other future unpredictable uncertainties of the emergency offer no guarantee that all possible conservation methods practiced can compensate for your reduced fuel oil supply. If you desire your home satisfactorily and healthfully heated, it can only safely be done by converting to coal.

Q. Can I retain my oil burner and use auxiliary heating methods?

A. Yes, but like other oil conservation methods, auxiliary heating can not offer a sure guarantee of healthful heat in the face of unpredictable conditions.

Q. Won't the new pipelines relieve the oil shortage?

A. No. President Roosevelt, through Secretary Ickes, advises that a shortage of fuel oil can not be averted. Secretary Ickes further advises that "it is quite possible that fuel and heating oil will be so short next winter that *deliveries may have to be refused to any consumer who was able to convert but has not done so.*"

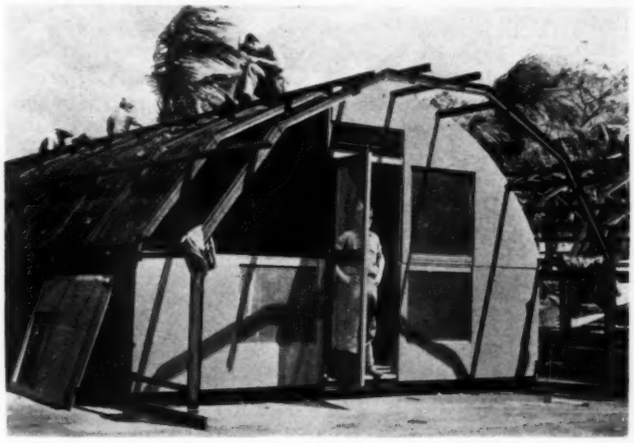
Above information is from Anthracite Industries, Inc., Chrysler Building, New York, N.Y.

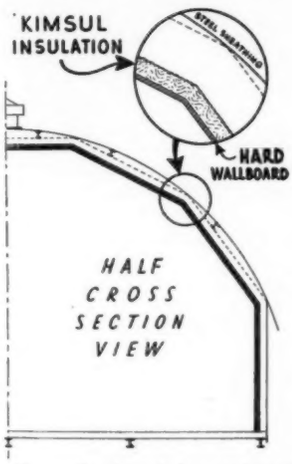
Kimsul Insulation for Army Huts

FEW realize the outstanding accomplishment of the building industry, from a mass production standpoint, in the military hut (sometimes known as the Quonset hut). Designed by army and navy engineers, it is in wide use as barracks, field offices, hospitals and other buildings in many parts of the world where our armed forces are located.

Originally constructed of steel framework with corrugated iron roofing and siding, some of the more recent models, due to metal shortages, now employ wood as alternate to these steel and iron materials. Interior finishing materials are composition panels and wood flooring.

Principal features of the military hut are: saving in shipping space, simplicity and speed of erection, and efficient demountability. Designed for such practical considerations, the military hut provides a high degree of protection and comfort for our fighting men. Well ventilated and impervious to weather, it serves efficiently whether in the heat of the tropics or the cold of the arctic.





ABOVE: official U. S. Navy photograph shows hut being erected somewhere in the tropics. Left, detail of construction.

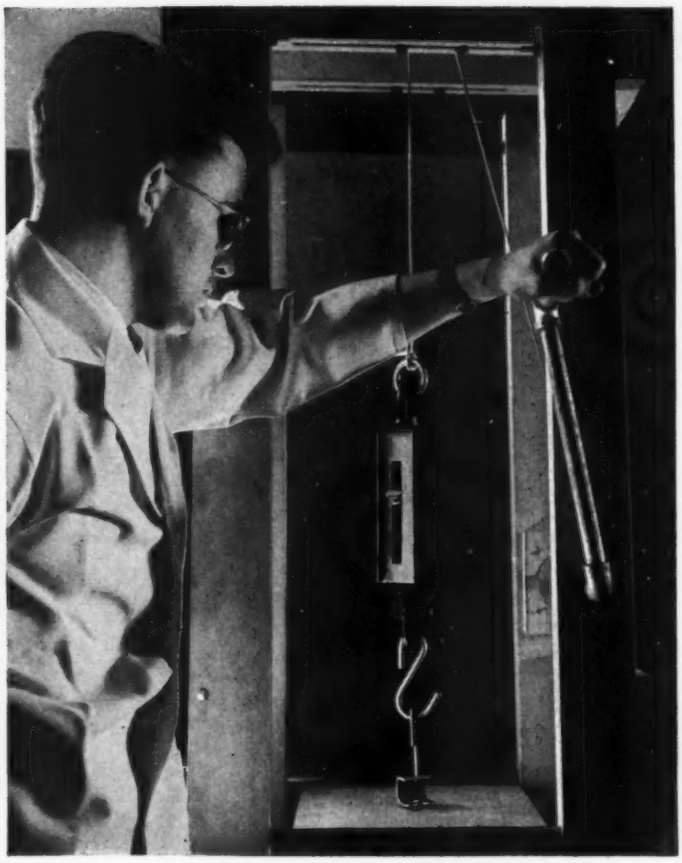
Protection against such extremes of heat and cold is provided in the Quonset hut by Kimsul blanket insulation, chosen for its high thermal rating.

Three other features of Kimsul insulation, however, were of equal interest to the engineers who approved it for the Quonset hut: One, because it is so easily and quickly applied to the peculiar design of the hut; two, because it saves so much space in shipping and storage; and three, because it saves so much in handling labor due to the compressed form in which it is delivered to points of erection.

Rippey Now District Engineer

GLENN RIPPEY, for the past ten years field engineer for the Portland Cement Association in Tulsa and northeastern Oklahoma, has been appointed District Engineer. He will direct the Association's activities in Oklahoma from headquarters in Oklahoma City.

Rippey joined the staff of the Association in 1925. During 1931 and part of 1932 he was employed by the City Engineering Department of Oklahoma City. He rejoined the Association staff in 1932.



He pulls nails out of Plywood

so you'll know more about driving them in!

• The nails you use with Douglas Fir Plywood in the future may be unlike the nails you have regularly called for up to now. *First* because war-time restrictions to save metal may have a lasting influence on nail sizes and weights. *Second* because the nail-holding tests now being conducted as part of the Douglas Fir Plywood Association's intensified research program may prove that under various conditions shorter or lighter nails—or nails or fasteners of different designs—are more efficient than those previously specified.

Of course the *complete* answer to this new nailing problem—and to scores of others—has not yet been determined. But by the time Douglas Fir Plywood is again generally available, our research men will be able to tell you how to use it to far better advantage than ever before. Douglas Fir Plywood Association, Tacoma, Washington.

TO HELP SPEED VICTORY the Douglas Fir Plywood Industry is devoting its entire capacity to war production. We know this program has your approval.

REMEMBER—there's a grade or type of Douglas Fir Plywood for every purpose. A genuine panel bears one of these "grade trade-marks":

EXT-DFPA—waterproof type
PLYWALL—wallboard grade
PLYSCORD—sheathing grade
PLYPANEL—cabinet grade
PLYFORM—concrete form grade

DOUGLAS FIR PLYWOOD
Real Lumber
MADE LARGER, LIGHTER
SPLIT-PROOF
STRONGER

"A PRODUCT OF AMERICA'S ETERNALLY REPLENISHING FORESTS"

PLANNING OUR TRANSPORTATION BATTLE

Here is an example of Western Pine Laboratory Research. This blueprint was supplied by a leading railroad. Every detail is being carefully studied with a view to determine where the use of Western Pines will improve the service of this scientifically designed box car.



In these wartime days, as in the days of peace, the Western Pine Association Research Laboratory is constantly experimenting to determine new values, new uses, and to improve manufacturing procedures for the Western Pines.

WESTERN PINE ASSOCIATION

YEON BUILDING WPA PORTLAND OREGON

*Idaho White Pine *Ponderosa Pine *Sugar Pine

*These Are the Western Pines

To stay in business during the war:

Build and Sell

THERE are a thousand and one items of wood and other easily obtainable materials that can be put to work for you. No enterprising building industry man needs to go out of business if he does not want to. Of course, some are willing to get a government job. But to any man who has once been his own boss, this is a comedown. He'd rather stay in business for himself.

Here are some practical suggestions for building and selling wood specialties to help you stay in business. These are easy to build, popular, and easy to sell. They will suggest many other items that can be sold in your community. The problem of estimating the cost, laying out and building is greatly simplified by the use of full-



POPULAR, inexpensive, easy to build.



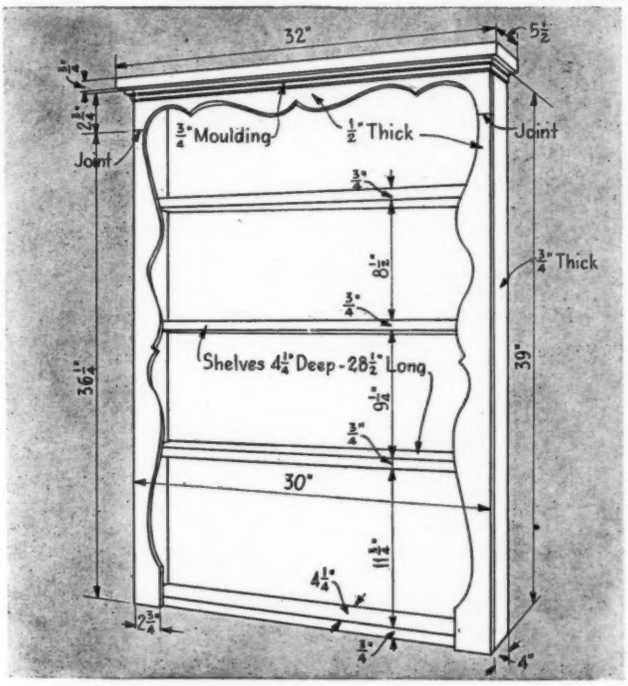
FOLDING picnic table and benches.

Wood Specialties

sized patterns. Such patterns have been prepared for the specialties illustrated with this article by the Easi-Bild Pattern Company of Pleasantville, N.Y. This firm has been active in creating the sale of wood specialties of this type, and recently sponsored co-operative advertising campaigns in New York and Chicago.

With design and construction simplified by the use of well-worked-out patterns, the remaining problem is principally one of SELLING. Because of the nature of the products a display seems absolutely essential. The logical procedure is, therefore, to build one each of the items decided upon, finish them in good shape and

This Dutch Colonial Wall Cabinet Is a Profitable Item for Quick Sale



DETAILED DRAWING of cabinet. Patterns are available.



MARYLAND wall shelf—one of hundreds of items to build and sell.

DOORS
ANY AMOUNT..ALL TYPES FOR WAR HOUSING OR REMODELING!



DELIVERIES NOW BY AMERICA'S LARGEST DOOR MANUFACTURER!

A LEADER in the door business for the past 52 years, Wheeler Osgood, America's largest door manufacturer, can supply your order completely and promptly—no matter how large or varied the order. Wheeler Osgood fir doors are uniform, super-strong, rot-proofed by nature and super-resistant to marring . . . Do business with the leader—you will find it to your advantage.

COLOR GRADED! Here's a big aid in helping you speed up the handling of war housing orders. Wheeler Osgood's amazing new "Color-Grading" system, called the "greatest idea in the door industry," shows you at a glance the grade, style, size and surface of every door in stock. To the bottom rail of each door is attached a distinctive colored label describing it completely. On de luxe Grade A doors this label features the Wheeler Osgood guarantee.

COLOR GRADED

A Genuine Guaranteed WHEELER OSGOOD DOUGLAS FIR DOOR

DE LUXE GRADE A — Bright blue label bearing grade, size, style, surface, *guarantee!* Helps customers recognize quality.

B Genuine WHEELER OSGOOD DOUGLAS FIR DOOR

MASTER GRADE B — Bright red label, bearing grade, size, style and surface.

• WHEELER OSGOOD "COLOR-GRADED" Grade A and B Douglas Fir house doors are built in strict accordance with U. S. Department of Commerce Standards CS73-38, CS91-41.

WHEELER OSGOOD DOORS



A COMPLETE LINE OF INTERIOR AND EXTERIOR DOORS

FREE Wheeler Osgood Sales Corp. Dept. 13, Tacoma, Wash.

Gentlemen: Please send me free literature on Wheeler Osgood "Color-Graded" Doors.

Name.....

Address.....

City..... State.....

EDWARDS



Weatherproof
FLAG POLE EMBLEMS

UNTIL the war is over we can manufacture and sell our regular lines of sheet metal building specialties only on priority orders. However, we still have a limited number of these handsome, patriotic emblems, not affected by priorities but offered subject to prior sale.

They are timely merchandise and fast sellers. Write for sizes, prices and quantity discounts.

THE EDWARDS MANUFACTURING CO.
542-562 Eggleston Avenue, Cincinnati, O.

TWO WAYS TO BUILD FOR THE FUTURE

1 FOR VICTORY



BUY UNITED STATES SAVINGS BONDS AND STAMPS

2 AFTER VICTORY

- - - use the TECO System of engineering timber to a construction job.



TECO CONNECTORS

The TECO Ring Connector spreads the load on a timber joint over practically the entire cross-section of the wood . . . brings the full structural strength of lumber into play.

Timber ENGINEERING COMPANY
WASHINGTON, D. C. PORTLAND, OREGON

paint them in attractive colors. Have a local photographer take good clear photographs of each so that you can prepare a picture book of designs to carry around with you in making sales. Then arrange to have the original models displayed at a local store, filling station, lumber yard, wayside restaurant or hot dog stand, or other spot where people pass. It may be possible to arrange to use a former automobile display room.

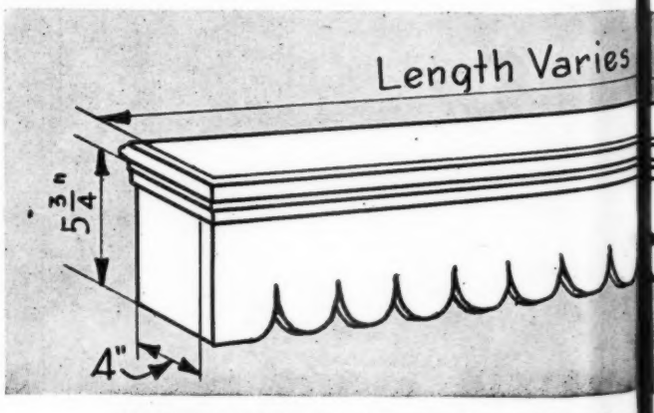
Once the models have been completed and photographs taken, you are in a position to call on various local firms who are anxious to handle a line of new products to replace some that have been put out of business by war shortages.

This is where good salesmanship, backed by the quality of your product and your photographs, will count. But once an outlet has been established the hardest problem will have been solved.

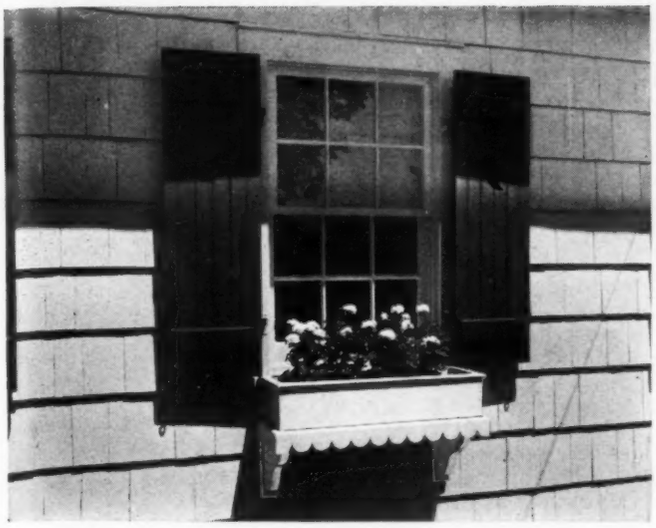
Let These Specialties Help You Make a Living

1. **Hanging bookshelf.**
2. **Flower pot shelf.**
3. **Guest towel rack.**
4. **Open bookcase.**
5. **Magazine rack.**
6. **Child's sandbox.**
7. **Curved-back lawn chair.**
8. **Handy workbench.**
9. **All-weather dog house.**
10. **Duncan knick-knack shelf.**
11. **Hanging wall table.**
12. **Handy Colonial bench.**
13. **Inside clothes dryer.**
14. **Decorative whatnot shelf.**
15. **Harrisburg bookshelf.**
16. **Child's clothes tree.**
17. **Dream doll house.**
18. **Garden trellis.**
19. **Williamsburg fence.**
20. **Utility cabinet.**
21. **Decorative weathervane.**
22. **Child's rocker.**

You can build and sell this WILLIAMSBURG VALANCE



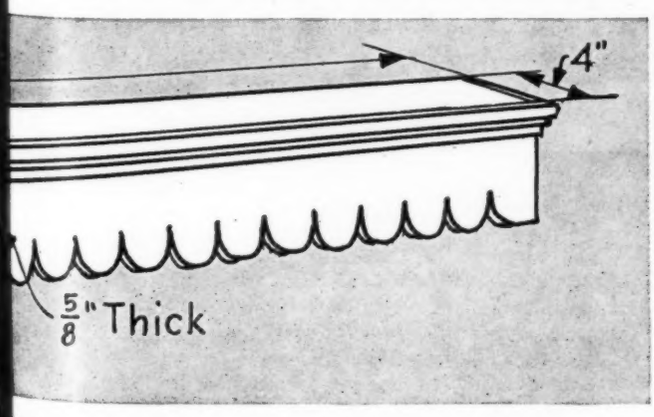
ISOMETRIC DRAWING of Williamsburg valance shows



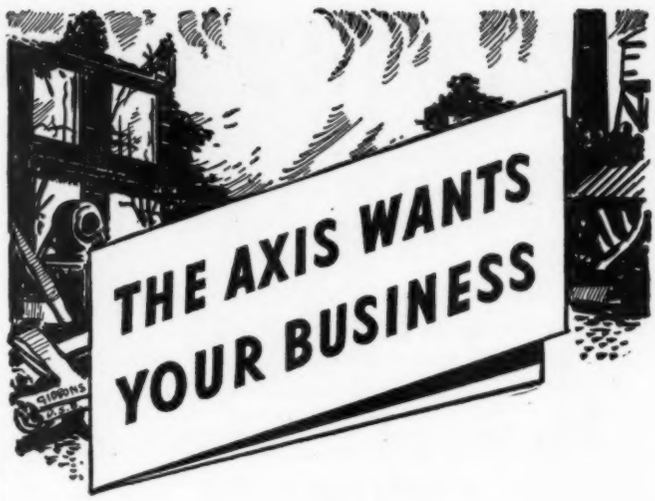
WINDOW BOX, bracket shelf and shutters, such as the above, are among the products resourceful men are making and selling today.



WINDOW VALANCE goes well with paneled walls—you can also build and sell furniture items like magazine rack in foreground.



Simple construction detail of popular wood specialty.



THIS is more than a war of mechanical monsters clashing in the night . . . more than a war of production.

It is a war for markets—*your* markets! The Axis wants your business—wants to destroy it once and for all.

With so much at stake, there is no doubt you will want to do everything you can to meet this Axis threat. Two ways are open: Speed production and put 10 percent of your income into WAR BONDS! The only answer to enemy tanks and planes is *more* American tanks and planes—and your regular, month-by-month purchases of War Bonds will help supply them. Buy now *and keep buying*.

THE GOAL: 10% OF EVERYONE'S INCOME IN WAR BONDS

When you install the Pay-Roll War Savings Plan (approved by organized labor), you not only perform a service for your country but for your *employees*. Simple to install, the Plan provides for regular purchases of War Bonds through voluntary pay-roll allotments.

Write for details *today!* Treasury Department, Section R, 709 12th St. NW., Washington, D. C.

EVERYBODY EVERY PAYDAY 10%

War Savings Bonds

This space is a contribution to Winning the War by

AMERICAN BUILDER

SONNEBORN'S

LAPIDOLITH
LIQUID

Patented
Concrete Hardener
and Dustproofer



SURE SIGN OF A FLOOR THAT NEEDS

LAPIDOLITH

Any concrete floor that can be scratched easily, needs the extra protection of Lapidolith Liquid to assure long, dust-free and heavy-duty service.

Lapidolith Liquid, because of its unique, patented improvements, is not expensive to use, yet gives greater protection against wear. It can be applied easily to new or old floors.

Write today for the factual booklet, "Concrete and Lapidolith Liquid," giving full details.

Where Results Count—Count on Sonneborn

L. SONNEBORN SONS, Inc.
88 Lexington Avenue New York, N. Y.

protection in the public interest

NEW

TOXIC WATER REPELLENT
MINIMUM STANDARDS

The new Minimum Standards of Toxic Water Repellency increase the natural resistance of wood not only to decay and stain, but also to warping, twisting and dimensional variation. The new seal, shown below, guarantees that the windows, doors, shutters, screens, storm sash and other exterior woodwork upon which it is branded, have been treated to conform with these important new standards.

NATIONAL DOOR MANUFACTURERS ASSOCIATION
332 South Michigan Avenue • Chicago, Illinois

NEW SEAL OF APPROVAL

LIC. NO. 000
TOXIC & WATER REPELLENT
APPROVED
NATL. DOOR MFRS. ASSN.

NEWS of the MONTH

Realtors to Hold National War Conference

THE NATIONAL Association of Real Estate Boards will hold a War Conference in centrally-located St. Louis November 18-20, inclusive, President David B. Simpson, of Portland, Ore., has announced. The Hotel Jefferson will be convention headquarters.

"The relationship of real estate to war activities is an intimate one and it reaches into every real estate office," President Simpson states. The national War Conference, of the entire membership of the Association, will meet with officials of a number of the federal agencies whose work calls for real estate war use or otherwise affects real estate in the war program.

Subjects which will be discussed include rent control, its administration, and its implications; the land purchase and leasing program of the Army and Navy; finding of homes for war workers by private building or remodeling; real estate in the hands of the Alien Property Custodian and of the Federal Deposit Insurance Corp.; maintenance of the nation's many million dollars' worth of existing structures of all types under war restrictions upon materials and equipment; industrial plant location in the war program; the movement for a co-ordinated national, state and local taxation policy that will draw the necessary war costs equitably and in a way that will conserve a sound financial situation for state and local governments; need for neighborhood shopping centers in new-sprung war-worker communities; civilian housing needs as affected by the pressure of in-migration and by stoppage of construction; commercial property management under war-period sales restrictions; action that needs to be taken now toward sound urban planning, including industrial soundness for cities, in the post-war period.

Meetings of the American Institute of Real Estate Appraisers, the Institute of Real Estate Management, the Society of Industrial Realtors, the National Institute of Real Estate Brokers, the Home Builders Institute of America, the Urban Land Institute, and the National Conference of Real Estate Taxpayers will be held in connection with the Conference but will be confined to breakfast, luncheon or dinner meetings.

The Conference planning committee includes President Simpson, Executive Vice President Herbert U. Nelson, Chicago, and Cyrus Crane Willmore, appointed by President Clarence M. Turley of the St. Louis Real Estate Exchange as general chairman of the host board's committee on the Conference.

Master Rule Expands

ON AUGUST 7th, the Master Rule Co. broke ground for the construction of a new wing which will extend the factory from East 136th Street to East 137th Street in the Bronx section of New York City, adding 3750 sq. ft. mfg. space.



MASTER Rule Co. breaks ground for new factory addition.

Although Mr. C. M. Nicholson, wielding the shovel has been almost constantly laid up with a heart ailment for the past three years, he has, nevertheless, maintained a keen interest in all matters affecting the Company, and is a living example of the grit and determination that has gone into the building and growth of Master Rules.

Pictured from left to right at the ground breaking ceremony are: R. C. Nicholson, General Manager, Karl Mante, Wood Rule Foreman, R. M. Holder, East Coast Sales Representative, C. M. Nicholson, President, Carl Holgren, Factory Manager, and Helge Wallin, Steel Rule Foreman.

Builder Men in Uniform

C. E. PAULSON, for the past three years in charge of the *American Builder* advertising office in San Francisco, has joined the U. S. Naval Reserve with the rank of Lieutenant, to handle special administrative duties in connection with naval aviation. He is now located at the Quonset Point, R.I., Naval Air Station.

R. B. Hitchcock, a member of the business research staff, Chicago office, has completed his pilot training at Foster Field, Texas, and has been commissioned a 2nd Lt. in the U.S. Army Air Force. Further training is now being taken at Columbia, S.C.





R. B. HITCHCOCK and (left) C. E. PAULSON

Beaver Rejoins Army—Wife Takes Over Sales Job

CAPTAIN Wilfred (Billy) Beaver, District Sales Manager for E. L. Bruce Co. at Jamestown, New York, and World War I ace, has left for active service with the United States Army Air Corps at an undesignated location. During his absence his wife, Mrs. Jennie Beaver, will carry on with his sales job.



CAPT. and MRS. BEAVER

Captain Beaver first won his rank of captain while serving with the Royal Air Force during the last World War. He enlisted in the British army a day or two after the war began and was transferred to the RAF in 1916. He was one of the Allies' greatest aces, being credited with bringing down 19 German planes and was decorated four times.

For the past fourteen years Captain Beaver has been serving as District Sales Manager of E. L. Bruce Co., making an enviable record on the sale of this firm's hardwood floorings and lumber products. Mrs. Beaver has been handling his territory for only a few weeks now but all indications are that she will live up to Captain Beaver's reputation as a capable and highly popular sales representative.

I. F. Laucks, Inc., Prints Engineering Data on Plywood

OF INTEREST to users, manufacturers and specifiers of plywood is a series of tables on "Strength and Deflection of Douglas Fir Plywood Under Loads Applied at Right Angles to Face," by Charles B. Norris, principal engineer, Forest Products Laboratory, and published by I. F. Laucks, Inc. The tables are the results of a cooperative project with the Forest Laboratory. The charts are devoted to Douglas fir plywood; but the method for adaptation to other woods is provided.

This special information is being reprinted as a 16-page booklet by request of a number of plywood companies. It appeared originally as a chapter in Mr. Norris' "Technique of Plywood," handbook of 250 pages just issued by I. F. Laucks, Inc. ($2.50 postpaid, Seattle, Wash.) Copies of the new booklet are available from I. F. Laucks, Inc., at ten cents to cover costs.

SAW and SAVE TIME WITH SKILSAW

on every job . . . big or small!

• Whether you're doing remodeling, building small Defense Homes or constructing biggest War Plants, you'll finish jobs *faster* with SKILSAW to speed up all sawing! SKILSAW saws wood, metals, stone, tile and compositions . . . saves real time on every cut . . . makes every man count *for more.*

• SKILSAW is more powerful...yet lighter, more compact, easier to handle. Ask your distributor to demonstrate SKILSAW and see why it's the favorite with 9 out of 10 War Contractors *everywhere.*

SKILSAW, Inc.
5031 Elston Avenue
CHICAGO



Bathe-Rite VICTORY
SHOWER CABINETS

• High Standard in attractive, sturdy LOW COST War Housing Bathing Facilities.

• Comply with all War Department and Federal Public Housing Authority Specifications.

• Offer advantages of
LOW FIRST COST
LOW ASSEMBLY COST
FAST, EASY INSTALLATION

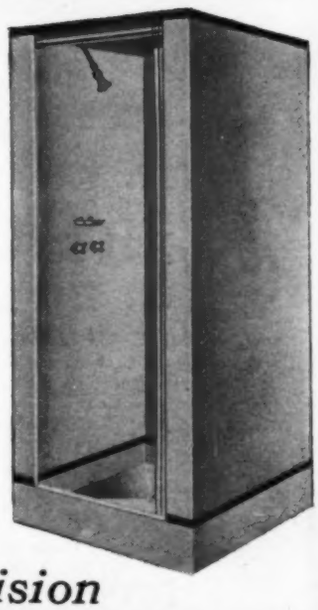
• Save 25% on Installation Time and Cost.

• Timed Delivery — any quantity when and where you want it.

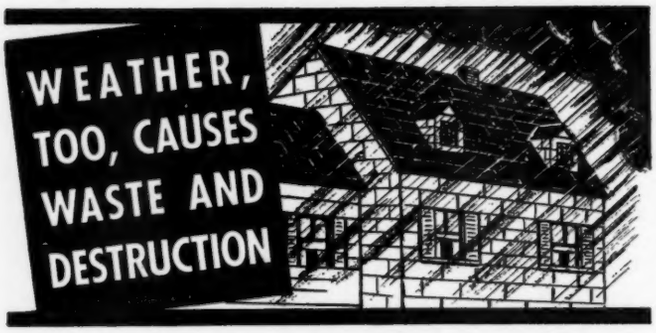
• THREE MODELS to fit every need.

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WRITE OR WIRE FOR DETAILS AND PRICES.



Bathe-Rite division
MILWAUKEE STAMPING COMPANY
828-S S. 72nd Street ★ Milwaukee, Wisconsin



Every Home and Building Owner Needs the Protection of

PECORA CALKING COMPOUND

It costs little to seal all building joints and all door and window frames exposed to weather. Deterioration is stopped at once. Fuel saving starts immediately. Pecora Calking Compound will not dry out, chip or crack when properly applied. Available in bulk or in special gun cartridges. You can depend upon Pecora to give unsurpassed results.

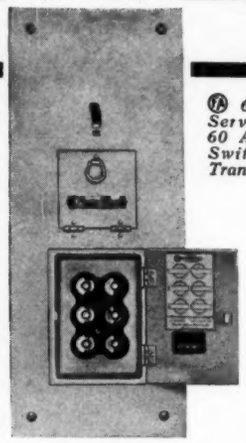
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Pecora Paint Company, Inc.

Member of Producers' Council, Inc.
Established 1862 by Smith Bowen

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ALSO MORTAR STAINS • SASH PUTTIES • ROOF COATING • PECOMASTICS FOR STRUCTURAL GLASS INSTALLATION



(FA) 6-Circuit Safety-type Service Equipment, with 60 Amp. Tumbler Main Switch and Fuse. Bell Transformer space optional.

SERVICE equipment adapted to the requirements of the modest bungalow—or of the most elaborate house.

(FA) FUSE SERVICE EQUIPMENT

contributes to the low cost of good construction. It is designed to give maximum protection. The box is of galvanized steel. The front, with its pearl gray lacquer finish, is neat and unobtrusive, and easily kept clean. Each unit is compact and pleasingly designed . . . Main switch and distribution circuits are combined in one unit. Capacities: 30 amperes, 115 volt, 2 wire, or 30-100 amperes, 115-230 volt, 3 wire. Available with from 2 to 20 circuits. Write for Bulletin 63, and name and address of nearest wholesaler.

EST. 1891 — THE SIGN OF A BETTER JOB

Frank (FA) Adam

SERVICE EQUIPMENT and LOAD CENTERS

FRANK ADAM ELECTRIC CO. ST. LOUIS, MO. U.S.A.

NEWS OF THE MONTH

(Continued from page 87)

National Brass Lifetime Guarantee Continued During Wartime

DEXTER Tubular locks and latches, originated by National Brass Company, Grand Rapids, Mich., iow made in steel and plastic, continue the lifetime warranty. Due to the fact that this is a period of many substitutions, necessitated by war restrictions, naturally the question may arise in the consumer's mind as to how far the substitution has gone. In the case with the Dexter Tubular it is limited only with substitution of materials. The same fine quality and the Dexter mechanism principle are rigid specifications of the Dexter line.

This warranty covers the lifetime of the building in which the Dexter Tubular is used, provides for repair or replacement at the option of the manufacturer, without charge.

The lifetime warranty also covers modern cabinet hardware of National Brass Company. In addition to being of advanced style, the cabinet hinges, pulls, knobs, and catches of the National Brass cabinet hardware line are now available in bright or dull finishes on a highly rust resistant zinc base plating especially processed and finished to resemble chromium. Also available in enamel.

Columbia Chemical Moves to Pittsburgh

THE EXECUTIVE sales office of the Columbia Chemical Division of the Pittsburgh Plate Glass Company has been moved to Pittsburgh from New York, vice president E. T. Asplundh has announced. Also involved in the transfer are the chemical division's traffic and advertising departments.



W. I. GALLIHER

"The move," Mr. Asplundh said, "is a continuation of the Company's program of co-ordinating its various divisions in the general office at Pittsburgh. Several years ago the executive office of the paint division was moved here from Milwaukee."

W. I. Galliher, director of sales of the chemical division, will be in charge of sales activities from the new Pittsburgh headquarters.



K. C. FRAZIER

The appointment of K. C. Frazier as District Sales Manager of the New York Metropolitan area has been announced.

Mr. Frazier is a graduate of Colgate University and a member of the Delta Kappa Epsilon fraternity. For the last ten years he has been Southwestern Manager of the Southern Alkali Corporation, an affiliate of the Pittsburgh Plate Glass Company.

Brooks Toler Joins SPA

BROOKS TOLER, State Forester for Alabama since 1939, has tendered his resignation to Governor Frank Dixon to accept the prime forestry position in the South—forester for the Southern Pine Association, New Orleans, it was announced by Secretary-Manager H. C. Berckes of the Association on Aug. 29. He takes over his new duties on October 1.

"The subject of forestry has always been of utmost importance to the Southern Pine industry," said Mr. Berckes, "and the need for more constructive work in this field has been enhanced by the problems growing out of the war effort. The addition of Mr. Toler to our staff should result in a more practical approach to the problems by individual manufacturers and the industry collectively. His background of experience should eminently fit him for this new position. He is well known among Southern Pine manufacturers and enjoys the confidence of the members of the forestry profession. I am confident that Mr. Toler will do much to bring about a better understanding between the industry and other agencies interested in the advancement of forestry and conservation."

Look Ahead 6 Months

(Continued from page 45)

officials, they bought land and embarked on home building programs of considerable size in the belief that priorities would be forthcoming. Now they are faced not only with the breakup of their organizations and the loss of their skilled employees, but with financial losses due to the necessity of carrying investments in land and improvements that cannot now be built upon. They are asking a re-issue of priorities on 1,000 units which were part of an original allotment not used by builders to whom they were issued. Active builders who have established their ability to produce should be assigned these unused priorities, they feel.

A Sound Record

Operating under Title VI some outstanding records have been established in Nassau County. The builders have demonstrated that the lease-option basis of selling homes under Title VI is workable and sound. One of the outstanding jobs of this type illustrated with this article is New Lynn at East Hempstead, developed under Title VI by Cy Williams and Walter J. Harter. These developers established an enviable record in their New Salem and Southgate developments in Port Washington. At East Hempstead they purchased space for 176 houses, of which only 50 have been completed. They are unable to obtain further priorities. These houses are built on wide grassy plots, finished in remarkably attractive colors to form a livable community of unusual charm. The houses are rented on a 30 months lease-option basis with a small deposit and $45-a-month rental.

Another job that has shown a fine quality of workmanship under Title VI is Maplewood Estates at Bellmore developed by David Van Dam, a former Holland banker. Here 50 Title VI houses have been built, of which 49 were rented on a lease-option basis and one sold.

Under the lease-option plan a deposit of $100 to guarantee a 30-months lease is required. The rental payments are $45 a month, of which $7.50 may be applied as part of the down payment. At any time during the 30 months the tenant may elect to take title to the property, at which time he is credited with the $100 deposit, plus the $7.50 per month. By the end of 30 months the mortgage has also been reduced to about $3,700.

Another active Title VI job is at Farmingdale, L. I., where Frank A. Droesch of Droesch & Sons, Inc., has completed and rented 80 homes out of 140 on which he has priorities. He has space for an additional 1,000.

On this Title VI job Droesch rents the houses at $38 per month on a five-year lease. The lease includes an option to purchase within the five-year period, at which time the new owner takes title subject to the reduced mortgage. The builder requires a $38 advance deposit from all renters.

Another type of project is that of Callan Brothers at Great Neck near a large airplane plant. The Callans are building two, four and eight-family masonry buildings on a straight rental basis. This firm has been engaged in high quality construction operations for many years and has a fine building organization, which, like many of the others mentioned in this article, will shortly be broken up unless priorities and materials have become available.

* * *

HOLC Houses Converting to Coal

AS A PROVIDENT property owner, HOLC has decided on wholesale conversion to coal furnaces for houses in the area likely to be most affected by fuel oil rationing. This government agency owns 2,000 homes equipped with oil-fired furnaces. To convert these furnaces for the use of coal will cost $150,000 or about $75 a house. HOLC feels that this expenditure is justified not only because of the vital necessity for conserving fuel oil, but also because it will make the property more salable. Many of these houses were originally equipped with coal furnaces, which had been changed to oil to increase marketability of the property under normal conditions. — From "Headlines" (NAREB) for Sept. 12, '42, p. 2.



Faster Than a Power Loader -- Merely Lift Gate to Charge Next Batch -- Load Hopper While You Mix and Discharge

Today's leading half bagger. Jaeger Drum gives more thoro criss-cross re-mix, faster discharge —Syphon Water Tank is accurate, fast—3¾ H. P. Air-Cooled Engine is light, compact—End Discharge Design is fast to trail, easy to spot and pour. *Get Catalog and prices.*

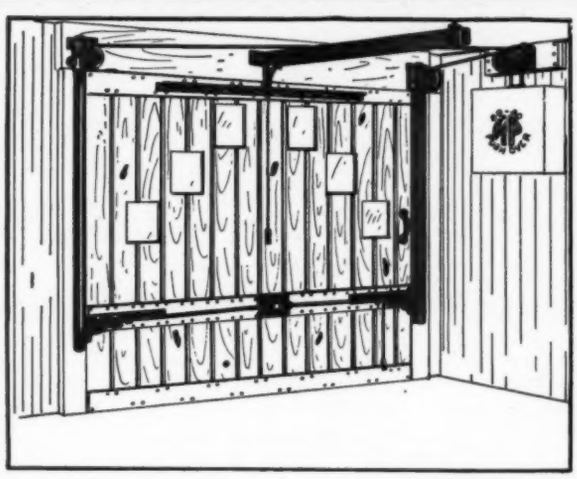


3½S HIGH SPEED TILTER TRAILER Also Non-Tilt Trailers up to 14S Size—World's Biggest Selling Line.

THE JAEGER MACHINE CO.
521 Dublin Avenue Columbus, Ohio

JAEGER SPEEDLINE

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Allith-Prouty is at 98% of capacity producing goods for war purposes. We will be soliciting your valued business again—WE HOPE SOON!

ALLITH-PROUTY, INC.
DANVILLE, ILLINOIS

NOW . . . A COMPLETE SWINGING DOOR UNIT



Here's a timely new Frantz feature . . . No. 8 Swinging Door Unit . . . an inexpensive set of doors and hardware for openings 8' wide and 7' high, that meets the specifications of the WPB critical list for Defense Housing. Doors are of laminated fir, toxic-treated for weather resistance. Hardware includes 3 pair Hinges, Latch, Foot and Chain Bolts, Pull, and all necessary screws. Door can be padlocked from the inside or outside. See your dealer today, or write for further information.

FRANTZ
Guaranteed BUILDWARE

FRANTZ
MANUFACTURING CO.
STERLING, ILLINOIS



MORE PROFITS . . . . LESS LABOR
WITH
MULE-HIDE STAY-LOX ROOFS

Get your share of the "No-Limitation" re-roofing farm and town market with Mule-Hide Stay-Lox, the re-roofing shingle designed for fast, low-cost application.



- Require 51% less nails per square than Hex or Nu Square strips.
- Save at least 30% in application labor.
- Tabs DOUBLE ANCHORED for extreme wind resistance.
- Designed for re-roofing.
- Exclusive Cor-Du-Roy "Expansion Joint" construction.

Write for Samples

THE LEHON COMPANY
4425 SOUTH OAKLEY AVENUE
CHICAGO • • • • ILLINOIS

Washington Review

(Continued from page 14)

(No return load required.) Rated load carrying capacity is subject to a formula and a schedule of tire capacity furnished by ODT.

After August 31, 1942, over-the-road carriers are required to register with Information Offices to cooperate with other carriers in reducing deliveries and mileage.

Lighter Structural Steel Authorized

NATIONAL emergency specifications for the design, fabrication and erection of structural steel for buildings were established on Sept. 10 by the War Production Board. The purpose is to conserve the supply of structural steel by requiring the use of higher design unit stresses than are normally used in the design of structural steel for buildings. By using in design the higher unit stresses stipulated in these specifications, somewhat lighter sections of beams, and other members entering into the construction of buildings will be permitted but not to an extent that in any way endangers the safety of the building.

The allowable stress for beams in flexure has been increased from previous allowances ranging from 16,000 to 20,000 pounds per square inch to a mandatory 24,000 pounds per square inch. Other savings of steel are effected through the use of continuity in design and welded fabrication.

It is estimated that the use of these specifications will result in a saving of approximately 10 per cent of the weight of structural steel entering into building construction. The actual tonnage of steel saved, of course, depends on the amount of future construction. Some quantitative measure of the saving is indicated by the statistics for 1941 which show that approximately 2 million tons of structural steel were used in the construction of buildings in that year.

The specifications manual is binding upon WPB, the Army, Navy, Maritime Commission, Reconstruction Finance Corporation, National Housing Agency and all other Government departments and agencies in respect to war construction and the financing of war construction.

Agencies undertaking or approving wartime construction are directed to obtain from the person in charge of the design of each building a certificate to the effect that the emergency specifications have been complied with and that the building has been designed to secure the greatest savings of steel practicable through continuity in design and through welded fabrication. In cases where Form PD-200 must be filed with WPB in order to obtain authorization to begin construction, the certificate should be filed with the form.

Authority to depart from the provisions of the directive may be granted, upon specific request, by WPB.

No More White Oak Veneer

BECAUSE of the urgent need for white oak lumber in construction of ships, the War Production Board on Aug. 24 issued Conservation Order M-209, which prohibits the use of white oak logs in the manufacture of veneer.

The veneer industry normally takes the finest quality of white oak logs for the manufacture of residential and office furniture.

The order prohibits the manufacture of white oak veneer except for implements of war to be delivered to the Army, Navy, Coast Guard, Maritime Commission, and War Shipping Administration.

Any manufacturer of veneer who owns or controls white oak logs in excess of 50,000 board feet suitable for the manufacture of veneer is required to report the board-foot quantity of such logs to the War Production Board.

48-Hour Week Ordered for Loggers

TO MEET A LUMBER SHORTAGE caused in part by a shortage of available manpower in the logging camps and sawmills, WPB Chairman Donald M. Nelson on Sept. 12 ordered a 48-hour work week in the lumber industry of the Pacific Northwest.

Approximately 100,000 men are normally employed in the logging camps of the Pacific Northwest. Enlistments in the Armed Services, the operation of the Selective Service Act, and higher earnings in shipyards and airplane plants have in recent months drained substantial numbers of men away from the camps, with a consequent drop in lumber production. Labor

turnover in the industry now is running at more than 10 per cent per month, and log inventories—usually at their annual peak in September—are the lowest in five years.

Revised PD-200 Form Now Required

APPLICANTS requesting priorities assistance or authorization to begin construction under provisions of the stop-construction order, L-41, must use the revised form PD-200 after September 30, the War Production Board announced on Sept. 18.

Beginning October 1, applications on the old PD-200 form, which has been in use since last December, will not be accepted.

Copies of the revised form are available at all field offices of WPB, FHA, Maritime Commisison, Army, Navy, U. S. Department of Agriculture County War Boards and many financial institutions.

* * *

Wartime Maintenance and Repair

(Continued from page 51)

tions and structural changes they obviously required purchases of as wide a variety of materials as were required to build them in the first place. Present restrictions would limit the scope of some of these jobs, but despite wartime curtailment the remaining volume is tremendous.

Loans totalling $2,547,233 took care of exterior painting or interior finish on 3,107 properties, an average of $819 per job. Supplying paint for maintenance of large residential or non-residential properties provides a big and very steady volume of business. Paint is particularly important at this time, because of its protective properties. It is important for interior use because of its ability to reflect light and thereby provide better working conditions and increase production in factories or offices.

During the year under consideration 1,522 commercial and industrial properties repaired or replaced roofs, involving a total of $674,391, or $443 per job. This work required roofing materials of all types, including roll roofing, asphalt or asbestos shingles; tar and gravel, and built-up roofing materials.

The record of FHA-insured loans on multi-family dwellings also reveals a huge volume of business. During 1940 there were 84,769 loans in all, with a total value of $45,030,647, of which 10,840 projects involved additions and alterations. These alterations required a wide variety of materials which today would be subject to wartime limitations. Their total value was $8,669,114, or an average of $799 per job.

Another 22,181 buildings required loans for exterior painting or interior finish. Total value of this work was $12,573,463, or an average of $566 expended on each building. Another 8,428 multi-family dwellings had roof repairs or replacements with a total value of $2,302,446, or an average of $273 per building.

The types of work just described differ somewhat from the maintenance of an office building, or from types of materials that would be bought by a large department store, a theatre seating 1,000 or more people, or maintenance on a public building or institution. Hospitals, as a group, have high priority ratings and can get whatever they need or want. Each type of structure differs slightly in its requirements, yet basically all are alike, for floors, walls and ceilings all require materials and finishing or covering regardless of whether they are in factories, office buildings, hotels, apartment buildings, hospitals or other institutions, schools, stores, or housing projects.

Because of war emergencies, stepped up industrial production, and high national income there is more maintenance work to be done on many existing buildings than at any time during the past fifteen years. Industrial production is at high levels, requiring structural changes and repairs in factories. Office buildings in big cities show a higher percentage of occupancy than for years. Hotels in urban centers are jammed. Hospitals are so busy they have beds in hallways. Housing shortages are quite general. People stand in line to get into movie shows. Schools are crowded with student war workers, army and navy technicians, air force cadets, and their regular enrollments. Obviously the more all of these buildings are used the more they will require in the way of maintenance and repairs. And the more care they require the greater will be the opportunities for maintenance chiefs, contractors and lumber and building material dealers to devote their time to essential maintenance and repair work, as suggested by Mr. Kahler at the beginning of this article.

Mr. BUILDER.....

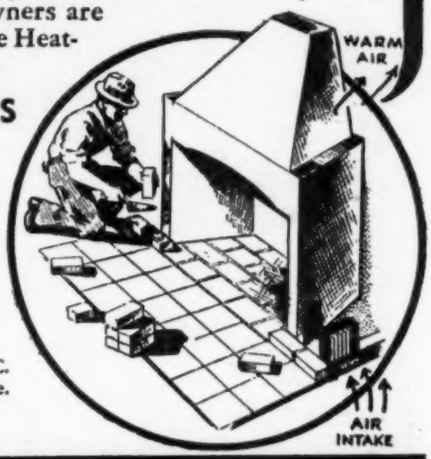
Every home owner for whom you put in a Heatilator Fireplace is thankful to you today for they have *circulating heat* from their fireplace—which means that their fireplace does more than double duty and this is appreciated in these days of fuel shortage.

Of course our war work makes it impossible for us to supply Heatilator units today. But many happy owners are learning that the Heatilator Fireplace

CIRCULATES HEAT . . .

SAVES FUEL . . .

WILL NOT SMOKE . . .



HEATILATOR, INC.
9110 E. Brighton Ave.
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HEATILATOR *Fireplace*



with A *Mall Saw* TRADE MARK



This powerful, light-weight easy-to-handle MALLSAW cuts trimming and beveling time and assures accurate fitting storm sash and doors. It is perfectly balanced for safe, one-hand use, operates from any regular electrical outlet and is easily adjusted for depth and bevel cuts to 45 degrees. Four other models with cutting capacities from 1⅞" to 4½" are available for Defense Housing, War Plant Construction and remodeling. Mail coupon below for full information.

MODEL 85
Capacity 2¾"

MALL TOOL COMPANY
7737 South Chicago Ave.
Chicago, Illinois

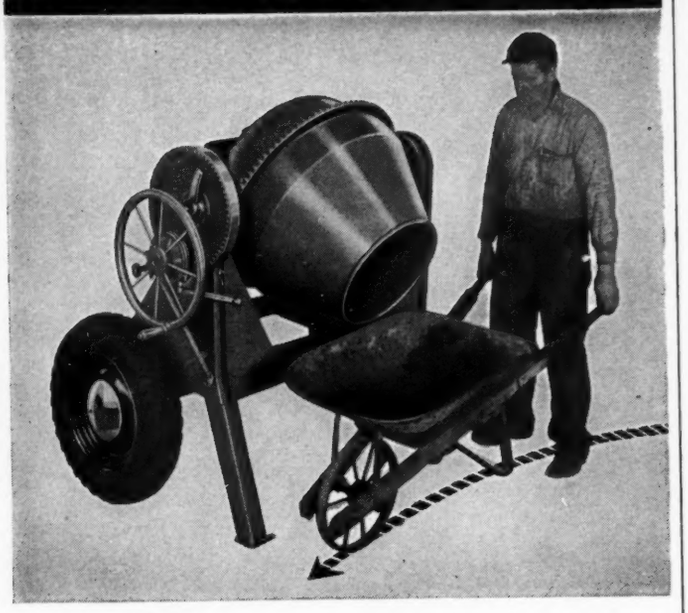
Please send free folder on MALLSAWS, MALL RADIAL SAW ARM, DOOR PLANES and DRILLS. A1042

Name .....

Street .....

City ..... State .....

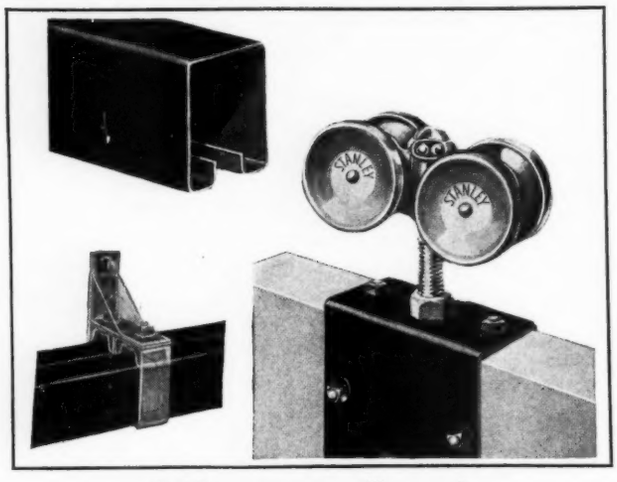
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Air-cooled engine
Light weight
Welded construction
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High speed trailing
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PORT WASHINGTON . . . WISCONSIN

STANLEY HARDWARE
For Rolling or Sliding Doors



3 Sizes meet all needs for Doors up to 1000 Pounds

Only three sizes, X, Y, and W, of Stanley No. 2641 Track and No. 2650 Hangers, handle all common sliding doors weighing up to 350, 700 and 1000 pounds, respectively. X track is 16 gauge, Y is 14 gauge and W is 13 gauge.

Stanley Hangers have accurate two-way adjusting nut and ball bearing swivels. Stanley "Hold-Fast" Track Clamps hold sections of track rigid and perfectly aligned. Send for catalog describing the complete line of Stanley Hardware.

THE STANLEY WORKS . . . NEW BRITAIN, CONN.

STANLEY

TRADE MARK

HARDWARE FOR CAREFREE DOORS

Further Building Restrictions Ordered

(Continued from page 43)

form PD-200 must be filed within the next two weeks.

"In carrying out the provisions of this revised order," William V. Kahler, Chief of the Construction Bureau said, "we intend to apply to each case the basic principle underlying the order, namely, the conservation of materials, labor and construction equipment to the fullest extent possible for the essential needs of war, instead of a mere literal interpretation of the clauses of the order.

"Every builder is urged to ask himself several questions and give careful consideration to their answers before filing applications for authorization to begin construction. He should ask himself whether his project is necessary to the successful execution of the war. He should ask whether it isn't practical to rent or convert instead of building new. He should ask if his design is the simplest possible, just sufficient to meet minimum requirements. He should ask if there are available all utilities, water, electricity, gas, etc., needed for his project.

"Even if he can answer all these questions satisfactorily, he should consider carefully the possibility of deferring his project for the duration. If every prospective builder met these criteria himself, there would be considerably fewer applications to handle in the Bureau and consequently the essential ones could be handled with greater dispatch.

"We want to caution all prospective builders against making commitments for materials with the hope that authority to build will be given. The mere fact that a builder has all materials on hand and requires no priority assistance, will not of itself govern whether he should be permitted to use them in construction. The sole criterion is whether the project is necessary to prosecution of the war or to maintain the public health and safety."

The War Production Board also has defined more fully the meaning of "project" as used in connection with its stop-construction order L-41.

According to Interpretation No. 2 of the order, a project means all separate buildings, structures or units of construction situated in close proximity to each other and integrated to serve a single general use. It does not mean a particular construction operation or job.

Generally speaking, whether several separate buildings together constitute a single project depends upon the exact engineering, functional and other phases of the particular construction involved. Of necessity, the interpretation provides only broad, general rules to serve as guides. Each case must be handled individually and a decision made according to the facts.

Under L-41 projects fall within several classes and each class has certain cost limits above which no construction may be started without specific authorization. These include residential, agricultural, industrial, etc.

As in the case of individual buildings, the class within which the project as a whole falls is determined by its predominant use. This is true even though single buildings comprising part of the project may fall within different classes.

A separate building, on the other hand, may be situated in close proximity to a project, but if it is not integrated to serve the same general use as the project, the building is not included in it.

Another part of the interpretation defines "total cost of labor" as it applies to the estimated cost of construction. Labor cost must include the actual money outlay for labor employed in the construction and the estimated value of all labor performed in the construction not entailing actual money outlay. From the latter may be excluded only the labor of an owner or tennant and members of the owner's or tenant's immediate family residing with him, on a project owned or leased by him.

Maintaining, Repairing and Converting Industrial Plants for War Work

(Continued from page 53)

the local conditions, and as the engineer may direct. If the aggregate is very coarse, the gravel or stone may be reduced, but in no case shall the volume of the coarse material be less than 1½ times the volume of the fine.

The mixture shall be determined by the engineer and once established shall not be changed except upon his written order.

Not more than 5 gal. of mixing water, including the moisture

in the aggregates shall be used for each sack of portland cement in the mixture.

The mixing of the concrete shall continue for at least 1½ minutes after all ingredients are in the mixer.

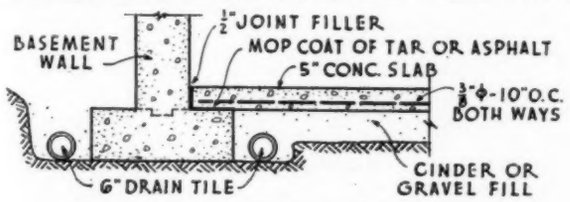
5. **Consistency:** The concrete shall be of the driest consistency possible to work with a sawing motion of the strike-off board, or straightedge. Changes in consistency shall be obtained by adjusting the proportions of fine and coarse aggregate within the limits specified. In no case shall the specified amount of mixing water be exceeded.

6. **Placing and Compacting:** The base slab shall be thoroughly wetted just prior to the placing of the finish, but there shall be no pools of water left standing on the wetted surface. A thin coat of neat cement grout shall be broomed into the surface of the slab for a short distance ahead of the topping. The wearing course shall be applied before the grout has hardened, and brought to the established grade with a straightedge. After striking off the wearing course to the established grade, it shall be compacted by rolling or tamping, and then floated with a wood float or power floating machine. The surface shall be tested with a straightedge to detect high and low spots, which shall be eliminated.

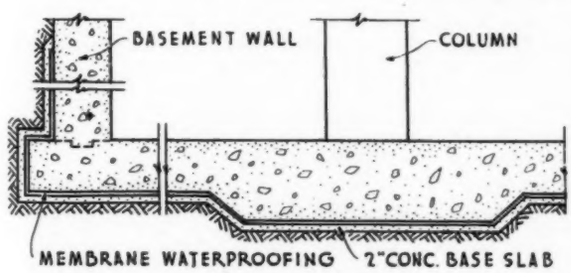
Note: When the wearing course is to be placed on same day as the base slab, the following should be substituted for the first three sentences of this section.

Water and laitance which rise to the surface of the base slab shall be removed before applying the wearing course. After concrete in the base slab has settled sufficiently so that water does not rise to the surface but within 1 hour after placing the base slab, the wearing course shall be applied and brought to the established grade with a straightedge.

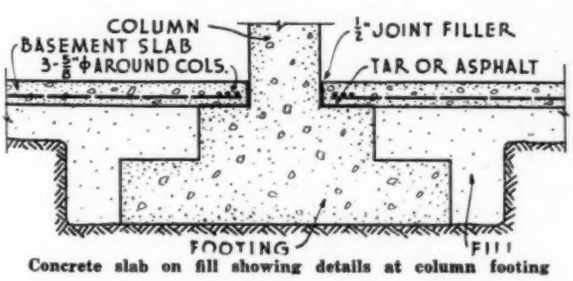
7. **Finishing by Troweling:** Floating shall be followed by steel



Concrete slab on fill showing detail at wall footing.



Basement slab designed for hydrostatic pressure.

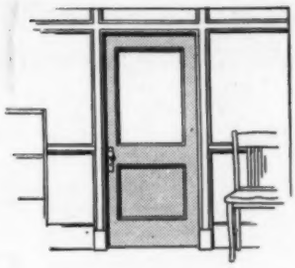


Concrete slab on fill showing details at column footing

troweling after the concrete has hardened sufficiently to prevent excess fine material from working to the surface. The finish shall be brought to a smooth surface free from defects and blemishes. No dry cement or mixture of dry cement and sand shall be sprinkled directly on the surface of the wearing course to absorb moisture or to stiffen the mix. After the concrete has further hardened, additional troweling may be required. This shall be done as may be directed by the engineer.

Note: Surfaces to be ground shall be swept with soft brooms after rolling to remove any water and surplus cement paste that may be brought to the surface. The wearing course shall then

(Continued to page 94)



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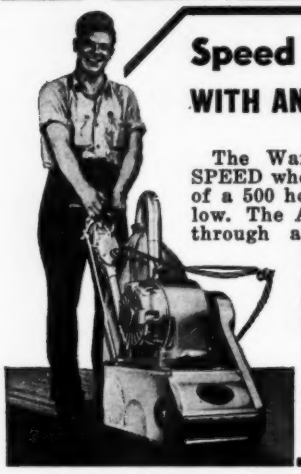


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(below) Section thru wood-slat curtain. Note how the design sheds weather.

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(Continued from page 93)

be floated and once lightly troweled, but no attempt shall be made to remove all trowel marks.

8. Curing and Protection: All freshly placed concrete shall be protected from the elements and from all defacement due to building operations. The contractor shall provide and use tarpaulins when necessary to cover completely or enclose all freshly finished concrete.

If at any time during the progress of work the temperature is, or in the opinion of the engineer will, within 24 hours, drop to 40 deg. F., the water and aggregate shall be heated and precautions taken to maintain the temperature of the concrete above 70 deg. F. for at least 3 days or above 50 deg. F. for at least 5 days when using normal portland cement, and above 70 deg. F. for at least 2 days or above 50 deg. F. for at least 3 days when using high early strength portland cement.

As soon as the concrete has hardened sufficiently to prevent damage thereby, it shall be covered with at least 1 in. of wet sand or other covering satisfactory to the engineer, and shall be kept continually wet by sprinkling with water for at least 7 days when using normal portland cement or for at least 3 days when using high early strength portland cement. In lieu of other curing methods, the concrete may be covered with asphalt-impregnated, waterproofed paper. All seams of such paper shall be overlapped and sealed with tape.

9. Finishing by Grinding: After the wearing course has hardened sufficiently to prevent dislodgement of aggregate particles, it shall be ground down with an approved type of grinding machine shod with rapid-cutting abrasive stones to expose the coarse aggregate. The floor shall be kept wet during the grinding process. All material ground off shall be removed by squeegeeing and flushing with water.

Air holes, pits and other blemishes shall then be filled with a cement grout of creamy consistency. This grout shall be spread over the surface and worked into the pits with a steel straightedge, after which the grout shall be rubbed into the floor surface with the grinding machine. The floor shall be kept moist for an additional 3 days.

The surface shall then receive a second or final grinding to remove the film and to give the finish a polish. It shall then be thoroughly washed and all surplus material removed.

Specifications for Resurfacing

Many old floors have been subjected to service that was too severe for the quality of the surface. Such floors may be resurfaced to provide a topping which will withstand heavy duty indefinitely. The specifications for heavy-duty floors may be used by changing designated paragraphs as follows:

Where old floor level must be preserved and where it is otherwise practicable to chip off the old floor topping, substitute the following for Section 1:

1. Base: The top of the old floor shall be removed to a depth of at least 1 in. The base shall be thoroughly cleaned of all loose material and dust to the satisfaction of the engineer.

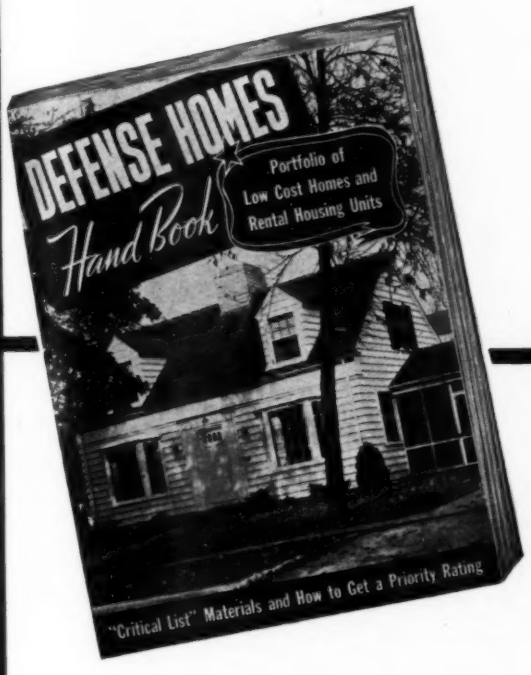
Where it is not practicable to chip off the old topping and the floor level may be raised, the following provisions may be substituted for Sections 1 and 6:

1. Base: The top of the old floor shall be thoroughly cleaned of all loose material, dust, paint, grease, oil or other material to the satisfaction of the engineer. Areas having the original troweled finish shall be roughened.

6. Placing and Compacting: The base slab shall be thoroughly wetted prior to placing the finish, but there shall be no pools of water remaining when the wearing course is to be placed. A thin coat of neat cement grout shall be broomed into the surface of the slab for a short distance ahead of the topping. Before the grout hardens, the wearing course shall be applied to a thickness of about 1 in. Wire mesh weighing not less than 30 lb. per 100 sq. ft. shall be laid and placing of the wearing course resumed to a total thickness of not less than 2 in. After striking off the wearing course, it shall be compacted by rolling or tamping and then floated with a wood float or power floating machine. The surface shall be tested with a straightedge to detect high and low spots, which shall be eliminated.

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● There is no need to go into detail here about these three new features. You have them in this October issue to judge for yourself. Our sole purpose in calling these new features to your attention is to impress upon you the importance of reading them regularly.

● Just as you find now in "Washington Review" an up-to-the-minute authentic interpretation of the newly revised L-41 regulation and order M-208 controlling the sale and use of soft wood, this new department, in coming issues, will reveal and clarify a multitude of developments originating in Washington and bearing vitally on the outlook for the building industry.

● In the new section "War-Time Maintenance and Repair of Buildings" you will find a bumper crop of ways to develop maintenance and repair work into a major source of income for the duration of the war at least. But let us point out here that no one issue can possibly serve you fully in this respect. The tremendous maintenance market has too many angles. You will have to read this section in each issue, every month, to reap the great harvest of ideas for maintenance and repair work on housing groups and houses, commercial and industrial buildings, public buildings and farm structures.

● As far as "Looking Ahead to the Post-War Home" is concerned, there you will find a wealth of information which will grow in its importance as time passes. Today's ideas on the post-war home as reflected in this issue will be modified tomorrow. The conception of the post-war home may undergo a "hundred and one" changes as conditions change, as new materials supplant the old, as new methods prove up. Only by watching the whole parade of new ideas as published in this section from issue to issue will the post-war home really take shape.

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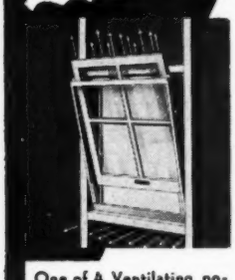
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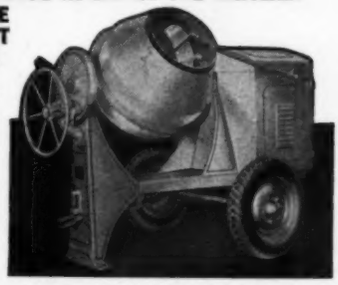
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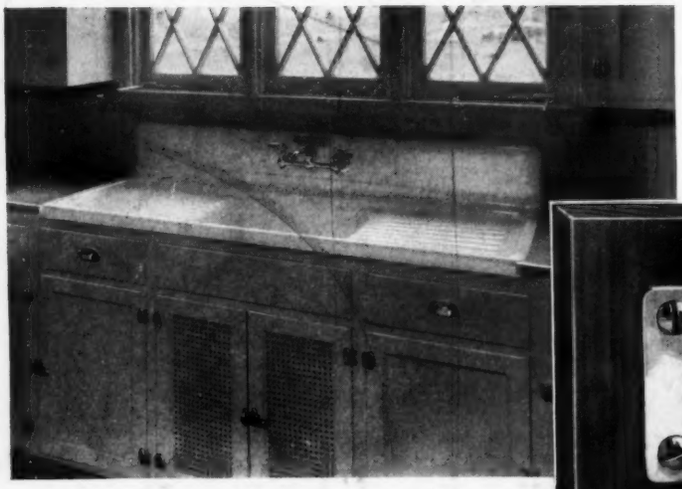
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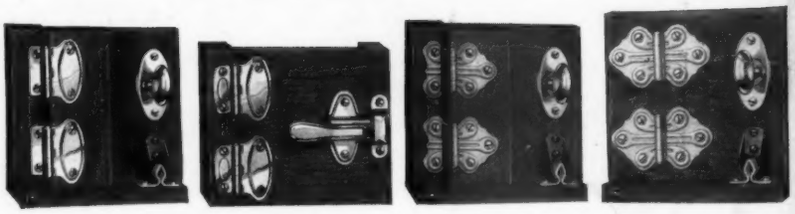
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